Clinical Lecture
ON
ULCERS.

Delivered at St. Thomas's Hospital,

BY FRANCIS MASON, F.R.C.S.,
SURGEON AND LECTURER ON ANATOMY AT THE HOSPITAL.

GENTLEMEN,—You will probably wonder that I should have selected so ordinary and so commonplace a subject as Ulcers for our clinical lecture to-day. But I have chosen it because, from what I have been enabled to observe, there appears to be a halo of mystery surrounding this class of diseases. This mystery has no doubt arisen from the fact that we seldom meet with an ulcer that is typically characteristic of its own variety. We find so many variations in the same ulcer that it is often impossible to give it a distinctive title. Thus confusion has arisen which, I think, may be partly traced to the numerous subdivisions that have been made from time to time by various writers, for each surgeon has, so to speak, a nomenclature of his own. You will perhaps charge me with being guilty of the like offence, but the classification that I have for some years adopted has, I venture to think, this advantage, that it possesses little or no novelty excepting that it is essentially simple.

The different kinds of ulcer that are commonly met with may be arranged in the following order:—

1. The healing ulcer or sore (the simple purulent ulcer of some writers).
2. The weak or œdematous ulcer.
3. The congested ulcer (varicose ulcer).
4. The inflamed ulcer.
5. The cachectic ulcer.
6. The phagedænic ulcer (serpiginous ulcer).
7. The sloughing ulcer.
8. The sloughing phagedænic ulcer.
9. The callous ulcer (chronic, indolent, atonic ulcer).
10. The specific ulcer. (*a*) The primary infecting syphilitic sore. (*b*) The cancerous ulcer.

In the first place it is well that we should have a clear understanding as to the physical characters of a *healthy ulcer*. I need not remind you that an ulcer is a gradual breaking down of tissue particle by particle—a molecular disintegration, as it is termed. It is the result of true inflammation with a softening of the inflamed parts, and the removal of these parts in minute portions. When the inflammatory mischief subsides, repair commences. Let us take the healthy ulcer as the standard of comparison, and I here show you a typical specimen in this patient, a woman who, you recollect, was admitted about a month ago for hæmorrhage from a rupture of a varicose vein in the leg. The ulcer is about the size of a shilling, it is moderately circular, its circumference is slightly raised, and has a bluish tint. This blue tint, observe, increases towards the centre of the ulcer, and these different shades of hue are thus explained. All ulcers are said to heal from the circumference to the centre, and therefore the most recently-formed pellicle of skin is the most delicate and transparent, and through it the granulations are indistinctly seen. Hence the blue tint increases towards the centre of the wound, and is least observed at the circumference, which by degrees gradually assumes the appearance of the neighbouring integument. The granulations are florid and have a pointed appearance, and although in reality very vascular, they do not bleed readily, because the walls of the minute vessels, which form loops in the granulations, are perfectly healthy, and thus the vessels are enabled to resist moderately rough handling. The surface of the ulcer, observe, is not particularly sensitive to the touch, and is covered by an inoffensive cream-coloured pus. Remember, it is of great importance not to displace this pus, which, as you probably know, is the shedding of the more superficial granulation cells. You will often notice how particularly careful we are not to remove it in dressing wounds. In truth, it is nature's protector to the granulations, and if it be washed away and fresh dressing be applied to the raw and exposed surface, the patient is put to an unjustifiable amount of pain for hours, until more pus is secreted. I yield to no one in the estimate I have of the importance of cleanliness, but the removal of healthy pus from the surface of such a wound as this would not only be unnecessary, but positively harmful. In dressing such wounds I hold that the lint should not be removed until it can be raised without making the subjacent granulations bleed. By all means let any excessive discharge be wiped away from the surrounding skin, but you may be sure that we shall best consult the interest and certainly the comfort of our patient if we interfere as little as possible with the work of nature. Meddlesome interference in this branch of the healing art is the most pernicious practice in surgery. *A propos* of this I would remind you of the case of a little boy in the hospital who has a most extensive scald on his right leg. You have just seen the fresh dressings put on without causing the slightest pain; in truth, we saved this poor boy what would otherwise have been agony by not removing a single piece of lint unless it was bathed on its under surface with the suppurative discharge. Moreover, we allowed the pus to remain on the wound, which formed a coating not only to protect the exposed surface from the atmospheric air, but to prevent the fresh dressings from coming immediately in contact with the ulcer.

2nd. The *weak* or *œdematous* form of ulcer is, according to my experience, a very common variety, and you may see an endless number of them both in the wards and amongst the out-patients. The granulations have a flabby, white appearance, their surface is iridescent, and they are not particularly tender to the touch. In this category I include another class to which a distinct place is assigned by some writers; that is, the *exuberant ulcer*. In this last the granulations have precisely the same characters as those found in the œdematous or weak ulcer, but occasionally they have a blue congested appearance. They are raised above the level of the surrounding skin, and may even overlap the integument. This exuberance is due chiefly to excessive stimulation of the part, and an increased activity of the vessels in the granulations. There is still another cause that favours these exuberant granulations, which is that, as I have already explained, the cicatrisation taking place from the circumference to the centre, the upraised granulations not only retard the healing process, but they become themselves more and more œdematous by the pressure at the circumference of the wound.

I may briefly refer to a form of exuberant ulcer which is connected either with diseased bone or with the synovial thickening associated with joint mischief. These have the peculiar button-like appearance, and sprout to an extraordinary degree in some instances. In doubtful and intractable cases, therefore, do not omit to search for a fistulous opening, which will most probably lead down to the cause of the discharge. In such examples it is useless to treat the granulations, for these are the effect and not the cause. Remove the cause and the effect will disappear.

3rd. The *congested ulcer* is one in which the granulations and, perhaps, the surrounding skin, have a blue congested appearance. Sometimes these ulcers are associated with varicose veins, hence they have received the name of "varicose ulcer." The word "varicose" rather implies a varicose condition of the larger superficial veins, but their enlargement is by no means constant. I therefore prefer to call such ulcers "congested," which describes pretty accurately the physical character of the granulations. With this form of ulcer there is frequently observed a brown, dusky, pigmental deposit in the surrounding integument, and it is very frequently met with in women in whom there is some venous obstruction arising from pressure of the gravid uterus, &c. It is commonly situated just above the ankle, and Mr. Hilton has given the true reason why ulcers occur so frequently about that neighbourhood. He says that at the ankle-joint there is a free communication between the superficial and deep veins, but that about two inches above the joint the anastomosis is less free, and at that point the greatest stress is laid upon the superficial veins. Hence ulcers in this situation.

Mr. Busk has described a "scorbutic ulcer" which, he says, occurs in persons having a scorbutic taint. It consists essentially of an exudation of fibrinous material, which after a time becomes highly vascular. I have only seen

one well-marked case of this form of ulcer. The patient was a young man, not a sailor, who had a sprouting, fungating, congested mass, about the size of a walnut, situated two inches above the external malleolus of the right leg. He had spongy gums, and the case was a typical one of scurvy. I have met with several instances of "congested ulcer" to which the title of "scorbutic ulcer" might well be applied, had they not failed to give a history of scurvy.

4th. *The inflamed ulcer.* In this there is evidence of intense inflammation, indicated by the bright redness, the burning heat, the acute pain, and more or less swelling of the surrounding part. The ulcer looks raw, and has, so to speak, an angry appearance, the granulations being of a brickdust colour, and the discharge from them thin, and perhaps bloody. Such ulcers may occur in any situation, but I think their most frequent seat is the skin over some prominent portion of bone, such as the tibia. They are often the result of injury, and are the type of the so-called traumatic ulcers, of which we see so many in the out-patient department. I frequently have occasion to refer to the difficulty there is in healing such ulcers, because of their situation; the fact is that, being commonly placed over a prominence of bone, the vessels are compressed, and hence the reparative process is retarded.

As a subdivision of the inflamed ulcer, I may name the *irritable* or *neuralgic* ulcer. In this, the type of which is to be found in fissures of the anus, the pain is quite out of proportion to the size of the wound; the intense pain is to be accounted for, partly from the very sensitive skin of the anus being involved, and partly from the constant action of the irritated sphincter. I question the propriety of giving the irritable or neuralgic ulcer an independent place in the nomenclature of ulcers.

5th. *The cachectic ulcer.* In this class I include those ulcers which seem to be associated with some constitutional disorder, such as scrofula, syphilis, or which arise from poisonous doses of mercury given to cure the latter disease. The affection commences as one or more hard lumps of variable size in the subcutaneous tissue, in which there is at first little pain. To these indurations the name of gummata has been applied, and they are said to be usually due to syphilitic taint. I doubt the necessary connexion of these gummata with syphilis, inasmuch as we see so many cases in which we utterly fail to elicit a history of that disease.

These ulcers may appear on any part of the body, but I think the face and the lower limbs near the knee are, as far as my experience goes, the most frequent situations. The induration just referred to may remain quiet for a time; at length the superimposed skin acquires a dusky bluish hue, and then, becoming thinner and thinner, at last gives way by ulceration, exposing a somewhat round or flattish slough, the edges of the wound being irregular and undermined. The pain is variable; sometimes it is intense, and is such as to prevent sleep at night. I here show you photographs of about a dozen of such cases, and in the two patients before us, both women—and I have noticed that so many patients suffering thus are women—we have typical examples of this form of ulcer.

To revert for one moment to the ulcer that is presumed to be characteristic of tertiary syphilis, I have often, as you are aware, been compelled to confess that I do not know how to describe such an ulcer, and so high an authority as Mr. Henry Lee admits his inability to speak positively on this point. He says that in tertiary syphilis "indolent tumours are formed in the skin, which very slowly desquamate or ulcerate, or become phagedænic." "Tertiary syphilis," he adds, "may probably affect every structure of the body, but the diseases thus produced so much resemble those that arise from other causes that, from the morbid changes alone, independently of the history of the case, it would often be almost impossible to recognise their true nature."[1] Yet Sir James Paget is more positive on this point; for, referring to the more superficial tertiary syphilitic ulcers, he states that "their most frequent shapes are circular, annular, or crescentic or horseshoe-like. The annular shape," he continues, "in which a round or oval portion of healthy or scar-like skin is surrounded by a ring of ulceration, which often extends at its outer border while healing at its inner, is almost certainly characteristic of syphilitic disease."

6th. The *phagedænic ulcer* expresses itself in its name (from φαγω, I eat). The surface has a brown dusky hue, but the granulations may assume a variety of forms. The edges, which are ragged, look as if they had been gnawed by the teeth of a rat or some such animal. The serpiginous ulcer (from *serpo*, I creep) is included in this class.

7th. The *sloughing ulcer*, as I understand it, is one in which the surface of the granulations is in a sloughing condition. Instead of being florid, they present a grey ash-coloured appearance; and this condition arises from the circulation in the granulations being retarded, which renders them first œdematous, and afterwards sloughing. The sloughing ulcer must not be confounded with the sudden death of a portion of the integument, such as we see in contusions of the leg, or as the result of excessive local inflammation, as in the prepuce when a sore exists on its inner surface.

8th. In the *sloughing phagedænic ulcer* the phagedænic has the sloughing process superadded, and I need not enter into further particulars as to its progress than to say that it is in many cases very rebellious to treatment, and requires very active remedies to arrest its progress.

9th. The *callous ulcer* (indolent, chronic, atonic) is one that is usually found in the neighbourhood of the ankle in old and feeble persons. The surface is smooth and glossy, with but few granulations, exuding a thin watery fluid. The edges are upraised, hard, whitish, and comparatively painless. Patients will carry such ulcers about them for thirty or forty years, in the belief that they are a kind of safety-valve; and they only apply for relief when, from some accidental cause, the ulcer becomes extraordinarily painful.

10th. The last class of which I have to speak is the *"specific" ulcer*, and of this we have two typical examples—(1) in the true Hunterian chancre; and (2) in the carcinomatous ulceration. You have so many opportunities of seeing the true infecting sore that I need scarcely allude to its characteristic features. You recognise its usually circular form, and how it ends abruptly with a defined margin in the surrounding skin. It has a springy feel, and when grasped between the finger and thumb resembles a piece of stout india-rubber. This hardness is due to the effusion of lymph, which may be noticed throughout in the history of true syphilitic sores. It is this lymph that breaks down, and hence the slight scar that is left when the sore heals, compared with the cicatrices that remain after the local or suppurating sores. The infecting sore has a moderately smooth surface, and it is not covered with pus, excepting it be irritated in some way. It may be found on any part of the body besides the genitals, and, if you care to learn more on the subject, you will find abundant examples of its anomalous position in a paper I contributed to the St. Thomas's Hospital Reports for 1874. 2. As to the *cancerous ulceration.* This has peculiar characters which if once well-noted can generally be recognised. You will remember several cases of ulcerating scirrhus of the breast, and how hard and nodulated the margins were. Further, how rebellious they were to treatment. Take, again, the epithelial cancer, which is the least malignant of the carcinomata, and you have seen various examples in the lips, and two cases especially of the penis. This form of cancer is seen as a small ulcer with indurated and irregular edges, which are sometimes white, and sometimes of a red colour. The discharge is thin, bloody, and there is often a peculiar odour accompanying it which, if once detected, will not be easily forgotten.

With regard to the *treatment of ulcers*, their management may be explained in a few words. In the *healing ulcer* little need be done beyond leaving it to nature, for the simpler the dressing the better. In the *œdematous* or *weak ulcer*, a stimulating lotion, say of sulphate of zinc, two grains to the ounce, or the application of zinc ointment, will generally suffice to effect a cure. In *exuberant ulcer* the redundant granulations may be repressed either by applying the solid nitrate of silver, or by making pressure with a piece of dry lint, which tends to promote suppuration, and thus to break down tissue. The *congested ulcer*, more than any other, requires the administration of saline purgatives and the prohibition of malt liquors and spirits. The same treatment applies to the *inflamed ulcer*, but here more especially warm fomentations, with or without anodynes, are indicated; and in suitable cases leeches may be applied, but if employed they should be placed at some distance from the ulcer, so as to act as derivatives. In the *irritable ulcer* the

[1] Practical Pathology, vol. ii., p. 303.

local application of opium in some form is beneficial, and the pain will in many instances be greatly alleviated by brushing the surface with a solution of nitrate of silver (ten to twenty grains to the ounce). The *cachectic ulcer* is best treated with alteratives. Iodide of potassium should be given in five-grain doses or more three times a day, and it is often advantageous to administer some ferruginous preparation. These ulcers are particularly improved by a nutritious, not a stimulating, diet, and thus cod-liver oil and wholesome puddings of a farinaceous kind do more good than ale, stout, wine, or spirits. In the *phagedænic*, the *sloughing*, and the *sloughing phagedænic*, tonics are imperatively demanded, but due care must be taken to clear the primæ viæ. It is a grave mistake to over-stimulate patients suffering from this form of ulcer, for the increased heart's action tends to increased local congestion, and hence the sloughing process is rather favoured. Opium may be given with great advantage, and in many cases I have seen marked benefit from keeping the part in a warm bath for twenty-four hours. The *callous ulcer* is one in which strapping may be most usefully employed, and I think that Baynton's plan is as good as any. He says, writing in 1799, that "the straps should be two inches wide, and long enough to encircle the limb, and overlap at the ends to the extent of three or four inches. The plaster should be one inch below and two or three inches above the diseased part." I have seen benefit follow the use of blisters to these callous ulcers, and have observed a marked improvement after the application of Friar's balsam (the tincturæ benzoini comp.) Lateral incisions to release the edges of the ulcer are, in some cases, very desirable. A bandage evenly applied is very serviceable in this and in all ulcers where general support is required. The *specific ulcers*, as you may suppose, require specific treatment, which, from want of time, I am unable to include in the present lecture.

The importance of dressing ulcers properly cannot be over-estimated. Whether lotions or ointments be used, the lint should be cut no bigger than the wound, and it is best to apply several small pieces, which should be placed in the more excavated parts, instead of using one larger piece; thus the ulcer comes more immediately under the influence of the remedy employed. If the ulcer be undermined the lint should be introduced carefully, and not packed roughly under the overhanging parts. I have a high opinion of the lotio hydr. nig. (black wash), which I use quite irrespective of the syphilitic character of a wound. Further, I may add that if the case is one that is likely to improve by strapping, it is unnecessary to use other local applications at the same time, for it is obvious that if lint were placed on the ulcer, and then strapping applied, the lint would of necessity become puckered up. Strapping, then, deserves its own place in the treatment of ulcers, and is of immense value in cases in which the ulcer, whatever its precise physical character, is not very painful, and which has assumed a somewhat chronic character. I show you on this patient how to apply the straps. The centre of the plaster is placed on the leg exactly opposite the seat of the ulcer, and the two ends brought forward and made to overlap. Each successive strap covers half or two-thirds of the preceding one, and they should all lie parallel and equidistant as far as possible. It is, however, not always easy to effect this, especially in an enlarged knee-joint, in which, owing to the contour, it will often be found necessary to deviate slightly from the ordinary rule of practice.

In the necessarily brief remarks that I have now offered I have endeavoured to simplify the subject of ulcers, and have done my best to show that ulcers, like other diseases, must be treated on common-sense principles; for example, the inflamed ulcer must be soothed, and the weak ulcer must be stimulated, and so on. Our duty is to alleviate local pain by suitable topical applications, and to improve the constitution by proper remedies. In attending to these two points, we place our patients in the best position for ultimate recovery.

AN epidemic of typhoid, affecting twenty families in the west-end of Edinburgh, and already fatal to several persons, is traced by Dr. Littlejohn to a dairy in which a person was suffering from the fever.

ON THE

POSITION AND MECHANISM OF THE HÆMIC MURMUR.

BY GEORGE W. BALFOUR, M.D.,
PHYSICIAN TO THE ROYAL INFIRMARY, EDINBURGH.

INORGANIC CARDIAC MURMURS—that is, murmurs audible over any part of the cardiac area, and occurring independently of any irremediable mechanical alteration of the organ—have been classified by authors under two heads: hæmic and dynamic. Hæmic murmurs have been regarded by all authorities as systolic in their rhythm; and by most, as basic in position; and as produced by the passage of an abnormal blood through a perfectly normal heart, after a fashion which has been variously explained. Dynamic murmurs, on the other hand, though also systolic in their rhythm, yet have their position at the apex, are regurgitant in character, and are supposed to be produced by a perturbed or defective action of the cardiac muscle itself, independent of any abnormality of the blood, which, however, probably always coexists.

Chlorosis, and the chlorotic cardiac murmur, is the typical example of the one class; chorea, and the apex murmur that so often accompanies it, the typical example of the other class. In the one set of cases the blood lesion is primary and paramount; in the other set the blood lesion is essentially secondary, though not always actually so, and it forms but one link in the chain of consecutive causes of the morbid phenomena. The essential lesion of the blood in both of these classes is deficiency in its nutritive qualities; and, in the latter class, we have superadded the exhaustion consequent upon almost incessant muscular action, or upon co-existent or pre-existent febrile disorder. This state of matters, as we all know, produces an enfeebled, relaxed, and flabby condition of the muscles, which, of course, is not confined to the external muscles, but extends also to the hollow internal muscles, which suffer proportionately to the work they have to do. In these conditions the heart necessarily participates, and we are not therefore surprised to learn that in fevers it sometimes becomes as limp as a piece of wet paper (Stokes[1]), nor that in serious cases of chlorosis it is found to be considerably dilated (Bamberger,[2] Friedreich,[3] Wunderlich,[4] Stark,[5] &c.) Beau, in 1856, associated fevers of various kinds with chlorosis and other forms of hydræmia as causes of dilatation of the heart, pointing out that it was rational to attribute this dilatation to that peculiar alteration of the blood which is common to all these different forms of disease.[6] Naturally he was the more inclined to adopt this view, as, so long ago as 1845, he had experimentally proved that death following the hydræmic condition of blood induced by repeated venesections, in dogs and rabbits, was accompanied by a dilated condition of the heart.[7] Dilatation of the heart, however, is, as was first pointed out by Stokes,[8] and subsequently by Gairdner[9] and Bristowe,[10] a very frequent cause of systolic apex murmur. Stark has shown that the dilatation of chlorosis may be accompanied by relative inadequacy of both the mitral and tricuspid valves, and that murmurs of regurgitation may thus be heard at either of the auriculo-ventricular orifices; while Parrot[11] has given it as his opinion that the true hæmic murmur is invariably a murmur of tricuspid regurgitation. The chlorotic or typical hæmic murmur is thus shown to be invariably accompanied by a condition of heart which may give rise to a dynamic apex murmur; while, in the opinion

1 Quoted from Lonis, Diseases of Heart and Aorta (Dublin, 1854), p. 368.
2 Lehrbuch der Krankheiten des Herzens (Wien., 1857), S. 89 and S. 246.
3 Virchow's Handbuch der Spec. Path. und Therapie (Erlangen, 1861), Bd. v., S. 296.
4 Handbuch der Pathologie und Therapie (Stuttgart, 1856), Bd. iv., S. 534.
5 Archiv der Heilkunde (1863), p. 47; and Gaz. Hebdom. (1863), p. 262.
6 Traité d'Auscultation (Paris, 1856), p. 355 and 365.
7 Archives Gén. de Méd., 4ème sér., t. ix., p. 151, &c.; and Gaz. Hebdom. (1863), p. 263.
8 Op. cit., p. 271.
9 Ed. Monthly Journal (July, 1856), p. 39.
10 British and Foreign Med.-Chir. Rev. (1861), vol. xxviii., p. 215.
11 Archives Gén. de Médecine, 6ème sér., t. viii. (1866), vol. ii., p. 153.

of some, the so-called hæmic murmur is always of this character. It is true that the choreic, or true typical dynamic, murmur has been alleged to be caused by "disordered action of the muscular apparatus connected with the valve" (Walshe[13]). But while clonic spasm of one or other of the musculi papillares might give rise to an intermittent murmur, there is some difficulty in recognising such spasm as an efficient cause in producing a mitral murmur of such uniformity as the ordinary curable choreic mitral murmur possesses. Besides, "there is no good proof that involuntary muscular organs participate in the muscular disorder" (Kirkes[13]); while "the admitted coexistence of rhythmical action of the substance of the heart with this alleged tetanic and irregular contraction of the papillary muscles, which, as proved by dissection, are directly continuous with the fibres of the ventricular walls, constitutes a still stronger objection to this theory" (Hayden[14]), especially if we "bear in mind the unity of nerve-centres, and the community of nerve-distribution enjoyed by both portions of the same fibres."[15] Moreover, the extension of this explanation to the dynamic murmur of weak and fatty hearts, in which there is not the slightest evidence of nervous disturbance—as has been done by Walshe—is quite inadmissible; while the explanation of "parietal debility of the left ventricle,"[16] adopted by Hayden, seems to be the only one applicable to both classes of cases, is perfectly sufficient, and is consonant with all the facts of these cases. But "parietal debility" is merely another expression for that muscular relaxation resulting in dilatation, which, as we have seen, is so universally recognised as a tolerably constant concomitant of various forms of fevers as well as of chlorosis. Thus we have the dynamic apex murmur of chorea associated in its cause with that occurring in various forms of fever, as well as in certain cases of chlorosis. Chlorosis, in its severer forms, is therefore, and has long been, acknowledged to give rise to a dynamic apex murmur, of a perfectly similar character with that so often occurring in the course of chorea, the eruptive and other fevers, and originating in a precisely similar manner—namely, in relative inadequacy of the auriculo-ventricular valves, the result of dilatation of the ventricles consequent on parietal debility. It is of consequence to remember that this dilatation is not active, in which case it would rather be a sign of increased than of diminished ventricular power; but that it is passive, the gradual result of residual accumulation in the cavity of a hollow muscle too feeble fully to discharge its ordinary function. It is also important to remember that dynamic regurgitation in its results differs in no respect from regurgitation due to organic disease, but, equally with the latter, is always followed by pulmonary congestion, as well as by all the usual consecutive results of obstruction to the circulation originating in the left heart, all of which may be detected with greater or less ease in proportion to the amount of regurgitation present, and the time it has persisted.

Bearing all these facts in mind, we are tempted to inquire how it is that the hæmic murmur of chlorosis becomes, in its later stages, an apex murmur of regurgitation, after having been in its earlier stage a basic murmur—apparently of obstruction. To this query there is, I think, but one reply, and that is that, all through, the murmur is due to ventricular dilatation, and the changes in its position of maximum intensity are due to alterations in the heart itself. I am quite aware that alterations as to the position and textural condition of the media overlying and surrounding the heart, bring about many remarkable changes, both in regard to the production and the propagation of murmurs. Into these, however, it is at present unnecessary to enter, except in regard to one or two points subsequently to be referred to.

In chlorosis the prime evil, so far as the heart is concerned, is unquestionably the spanæmic condition of the blood, however that may have been brought about. In this state the great defect is the diminution of the cellular element, the serum remaining more or less normal; sometimes it is increased in amount, but it is never diminished, though occasionally its constituents are more or less altered. Thus, even when at rest, the heart has at least as much work to do as usual, and sometimes it has more, while it is much less able to do it; and whenever any exertion is made the breathlessness due to the state of the blood necessarily calls upon the heart for more than usual effort, which it is less than usually able to exert. The result of this is easily foreseen; residual accumulation commences, and gradually increases, in the left ventricle, for it is there that the strain primarily falls, and it is the left ventricle which suffers first and most in these and similar cases, as we learn from Stokes[17] and others. By and by the dilatation increases so much that a relative inadequacy of the mitral valve is established, and regurgitation is set up. We must not forget, however, that during all this time a similar process of congestion, from residual accumulation, has been gradually going on in the left auricle first of all, next in the lungs, and then in the right ventricle, terminating, of course, in the systemic venous system, where all such processes naturally end. This process is essentially slow and gradual, but it is constant, and proceeds *pari passu* with the changes in the left heart, the passage to the right heart being probably not long delayed by the distensibility of the pulmonary vessels. It is important also to remember that, in accordance with a well-known law, some degree of hypertrophy is set up in probably every case, but this must necessarily be imperfect, and must lag much behind the tendency to dilatation.

From these preliminary explanations it is obvious that in chlorosis we may have a murmur at all the four cardiac orifices; but I am quite certain that most observers will agree with Hayden that its most ordinary position is the base of the heart, and that it has no "definite line of propagation, as is the case with organic murmurs in this situation."[18] This absence of any distinct line of propagation up the aorta, innominate, and carotid, of course at once renders untenable the classic hypothesis of Hope,[19] Bellingham,[20] Potain,[21] &c., who hold that the cardiac hæmic murmur is always aortic in its origin. Marshall Hughes,[22] feeling the force of this objection, was, I believe, the first to suggest the orifice of the pulmonary artery as the source of the murmur, forgetting that under ordinary conditions any purely hæmic, intracardiac cause of murmur must act at least as forcibly at the aortic orifice as at the pulmonary. And Marey did not improve matters by suggesting that the basic murmur was due to the formation of fluid veins at the aortic orifice, by the lowering of the tension within the aorta itself,[23] because most observers are agreed that the murmur is at least as loud at the pulmonary orifice as at the aortic, while the accentuated pulmonary second indicates an increase of tension within that artery—a condition also proved to exist by the gradual development of dilatation of the right ventricle. The cause, therefore, supposed to favour the production of the murmur at the aortic orifice is wholly inoperative at the pulmonary orifice, where nevertheless the murmur earliest makes its appearance and is usually loudest.

This basic position of the chlorotic murmur in its early stage of course excludes Parrot's supposition of its being always tricuspid in its origin; nevertheless, I acknowledge that a greater or less dilatation of the right ventricle, as well as a more or less evident undulation or pulsation of the jugular veins, are always present, though I think that most observers will agree with me that a systolic tricuspid murmur is the rarest of all the murmurs which may be found in connexion with chlorosis, unless, indeed, we regard the murmur not unfrequently found in the mitral area in advanced cases as of tricuspid origin, which there are some good reasons for doing.

We must not also forget that although the reasons already stated preclude the idea of the origin of the chlorotic murmur in its commonest form at either the aortic or the pulmonary orifice from ordinary causes, yet it might possibly arise at the pulmonary orifice from compression, during the ventricular systole, of the artery uncovered by retraction of the lungs, as has been pointed out by Quincke.[24] In all cases, however, where the murmur

[13] On Diseases of the Heart and Great Vessels, 3rd edit. (London, 1862), p. 96.
[13] Medical Times and Gazette (1863), p. 637.
[14] Diseases of the Heart and Aorta (Dublin, 1875), p. 268.
[15] Hayden, loc. cit.
[16] Hayden, op. cit. p. 278.
[17] Op. cit., p. 372.
[18] Hayden, op. cit., p. 252.
[19] A Treatise on Diseases of the Heart (London, 1839), p. 106.
[20] Diseases of the Heart (Dublin, 1853.)
[21] Dictionnaire Encyclop. des Sciences Médicales, t. iv., p. 392.
[22] Guy's Hospital Reports, second series, vol. vii., 1851, p. 161.
[23] Physiologie Médicale de la Circulation du Sang (Paris 1863), p. 479.
[24] Berliner Klinische Wochenschrift, 1870, No. 21, p. 290.

depends solely upon this cause, and the lungs, as in chlorosis, are texturally sound, full inflation of them causes the murmur completely to disappear. But this is not the case in chlorosis; a full inspiration with subsequent holding of the breath certainly makes the murmur somewhat fainter, but never causes it to disappear.

Besides, however, all those causes of basic murmur already shown to have no influence in the production of the chlorotic murmur, in its early stage at least, there is one other of more recent discovery which in its essential nature, the position of the murmur to which it gives rise, and its mode of propagation, exactly fulfils all those conditions which we find associated with the chlorotic murmur.

Skoda mentions that in cases of dilatation and hypertrophy of the right ventricle, dependent upon incompetence of the mitral valve, a systolic murmur is often audible in the pulmonary artery; this, he adds, is "perhaps" dependent upon softening (*auflockerung*) of the internal coat of the dilated artery.[25] So far as I know, Skoda was the first to point out the existence of this murmur, which has long since been recognised as of no infrequent occurrence in mitral regurgitation, whether accompanied by stenosis or not. If stenosis be present, it is somewhat remarkable to hear, as we often do in such cases, a presystolic murmur over the apex, and a systolic one in the region of the pulmonary artery. Skoda's idea as to the causation of this murmur was not long maintained; it was not difficult to show that the internal coat of the pulmonary artery in these cases is not softened, and that its condition in those cases where this murmur had been present does not differ from that in those other cases where this murmur had been absent. Meyer,[26] who next took up this question, endeavoured to show that this murmur was produced by the propagation of the vibrations of the mitral valve to the wall of the pulmonary artery. But, supposing this to be an efficient cause, it is difficult to see why these vibrations should not be propagated to the aortic wall which is attached to the same fibrous ring, rather than to the pulmonary artery which is attached to the same fibrous ring with the tricuspid valve, and belongs, as it were, to a different heart. If it were produced in this way, we ought to have the systolic murmur loudest in the aortic area in these cases of mitral regurgitation, instead of in the pulmonary area; but this we know not to be the case. Bamberger supposed this systolic murmur, audible in the pulmonary area in cases of mitral regurgitation, to be due to an abnormal relaxation of the coats of the pulmonary artery. It may be well to give his own words. He says this murmur "seinen grund höchst wahrscheinlich in der durch die andauernde Erweiterung bedingten Erschlaffung der Gefässhaute hat."[27] And I especially quote Bamberger's words, because Naunyn has said—"Bamberger und ihn folgend Gerhardt geben an; es sei das bei mitralis insufficienz in der gegend der Pulmonal Klappe hörbare systolische Geräusch eine folge der abnorm *hohe Spannung*, in welche die wandung der Pulmonalarterie unter solchen Umständen versetzt würde." I need not say that Bamberger's own view is utterly devoid of any rational foundation whatever; while, on the other hand, it is unnecessary to discuss the opinion ascribed by Naunyn to Gerhardt, as he,[28] as well as Paul Niemeyer,[29] have now both adopted the view originally propounded by Naunyn himself.[30] By a careful examination of these cases, Naunyn appears to have distinctly made out that the position of maximum intensity of the murmur in them is not over the pulmonary artery at all, but one or two inches to the left of it, and in the same plane, just where anatomy teaches us that the appendix of the left auricle comes up from behind. Naunyn therefore regards this murmur as propagated to the chest wall from the left auricular appendix; and he supposes the vibrations which constitute the murmur to be conveyed to the auricular wall by the fluid veins formed by the regurgitating blood at the auriculo-ventricular opening, which carry with them the vibrations originating at that orifice to the auricular wall upon which they impinge. I entirely agree with this explanation given by Naunyn; and though he has not specially referred to the chlorotic murmur as originating in this way, it is not, I think, difficult to show that the history of the development of this murmur, as well as its primary position of maximum intensity, fully confirm this theory of its causation.

It is a difficult matter to explain why a murmur of regurgitation, which always originates at the auriculo-ventricular opening, should be at one time audible at the apex and at another at the base. But some approximation at least to an explanation may be attained if we consider that sounds are only audible vibrations, that in fluids these vibrations originate only at some part where the stream is constricted, and are not only communicated to the constricting walls at the point of origin, but are also carried with the fluid veins and transferred by them to any solid upon which they may impinge. In these circumstances it is obvious that a murmur of mitral regurgitation may be audible either at the apex or the base, according to the relative readiness with which its vibrations are transferred to the chest-wall in either situation. If the vibrations are powerful, they are readily propagated to the ventricle, and make their appearance as a distinct murmur at the left apex, which under most circumstances of mitral regurgitation comes more directly in contact with the chest-wall than the auricle—at first, at all events,—and for long continues to do so, because the cardiac muscle in these cases being fairly firm, consecutive dilatation is only very gradually developed. It is quite otherwise in chlorosis. In this disease residual dilatation is the essential lesion of the heart, and the murmur only becomes developed as a late result. By this time the left auricle, which very early commences to dilate, has become so enlarged that the appendix is frequently visible as a pulsating tumour between the second and third ribs on the left side, while the left apex is gone, separated from the chest-wall by the dilated right ventricle lying in front. How trifling a dilatation of the right ventricle is sufficient to produce this displacement of the left apex, even in the normal state of the heart, may be readily ascertained by anyone who places his hand over the ventricular area and holds his breath. In a very few seconds the left apex will be found completely to disappear, and that without any perceptible development of the impulse of the right ventricle. So it is in chlorosis; the right ventricle speedily becomes sufficiently dilated to displace the apex beat without its own impulse being developed in any marked manner, though that ultimately follows in due course. By this time, or soon after, the left ventricle is so dilated that during its systole the edges of the mitral valve are unable to meet, and regurgitation results. The fluid veins thus formed are of low tension, the vibrations originating at the auriculo-ventricular orifice have little force, so that they are propagated but feebly to the wall of the left ventricle, which in its turn, from its deep-lying position, transmits them with difficulty to the chest-wall, where they become audible only as an impure first sound. On the other hand, these vibrations readily pass with the fluid veins to the wall of the left auricle on which they impinge, and the auricular wall being already somewhat tense from unusual dilatation, and being also, from the same cause, in more than usually close apposition to the chest-wall, these vibrations are readily transmitted to it, and become audible as a soft murmur in the area of the auricular appendix, around which it is propagated to an extent commensurate with its own loudness and the resonance of the chest-wall.

Various other circumstances may combine to facilitate this mode of propagation of the murmur of mitral regurgitation, but the conditions described are certainly efficient, and are more or less present in all cases in which this mode of propagation is observed.

By and by, however, without there having been any disappearance or diminution of the basic murmur, the impure first sound at the apex becomes changed into a loud, blowing murmur. And this may occur in two ways: first, the dilatation and subsequent hypertrophy of the left ventricle may be so increased that the vibrations originating at the auriculo-ventricular orifice become forcible enough to be transmitted to the chest-wall in the region of the apex; or, second, the right side may become so dilated that its apex occupies the normal site of the left apex, and a tricuspid

[25] Abhandlung über Percussion und Auscultation, 3rd Ed. (Wien., 1844), S. 223.
[26] Virchow's Archiv, Bd. iii., Heft 2, S. 277.
[27] Op. cit., S. 93.
[28] Lehrbuch der Auscultation und Percussion, 2nd Ed. (Tübingen, 1871), S. 283.
[29] Handbuch der Percussion und Auscultation (Erlangen, 1870), Bd. ii., Abtheilung i., S. 140.
[30] Berliner Klinische Wochenschrift, 1868, No. 17, S. 180.

may thus be mistaken for a mitral murmur. Both kinds of cases may be met with, and require to be differentiated one from the other.

There is no doubt, also, that cases occasionally do occur in which we have—besides the auricular and any other murmur which may be present—a distinct systolic murmur originating in the aorta and propagated along the arteries; and there is every reason to believe that the same thing may occur in the pulmonary artery, quite apart from any external source of pressure in either case, and from internal causes alone. This will be found to occur at a somewhat advanced period of the disease, when the primary dilatation of the ventricles has been followed by some degree of hypertrophy; so that, as Beau[31] has pointed out, a larger wave than usual is thrown into the arteries, not only therefore producing vibration waves in the arterial coats themselves, but very possibly also forming fluid veins at the arterial orifices, from the relative constriction produced there by the abnormal friction of the chlorotic blood—a relative constriction which, in some cases at all events, may be supplemented by some slight dilatation of the aorta itself, due to relaxation of its tissues. For the production of the aortic systolic murmur, therefore, in such cases, we have the possible occurrence of two efficient causes, sometimes one of them, and at other times the other, predominating; while of course similar causes must coexist in similar relation to the pulmonary orifice, and be followed there by similar results.

The sequence of the cardiac phenomena in chlorosis is entirely in accordance with the pathological view just propounded. Whatever may be the ultimate cause of the chlorosis, *spanæmia* is its first evident symptom, and of this the earliest sign is a *venous hum—bruit de diable*—in the right jugular vein. As the result of this spanæmia, the cardiac muscle becomes relaxed, and its cavities consecutively dilated from residual accumulation. The earliest indication of the delay of the blood, resulting from this residual dilatation, is *accentuation of the pulmonary second*. This is speedily followed by a *systolic murmur* in what I have termed the *auricular area*, an inch or two to the left of the pulmonary area, and in the same plane where a distinct pulsation is usually both to be felt and seen. This murmur radiates of course all round its position of maximum intensity, but is most readily propagated to the right from the resonant property of the sternum. With this murmur there is always associated *an impure first sound in the mitral area*, and in many cases this gradually passes into a *systolic murmur*. When the chlorosis is cured these murmurs disappear, precisely in the reverse manner to that in which I have described them as arising, every trace of the auricular pulsation vanishing long before the venous hum ceases to be heard. This systolic auricular murmur coincides in time with the systole of the ventricles, its rhythm is ventriculo-systolic, its position basic, differing in both, *toto cœlo*, from the so-called presystolic murmur, which is apical in position, and auriculo-systolic in rhythm, coinciding with the time of the contraction of the auricles; the former murmur is also soft in character and high in pitch, the latter rough and low. In chlorosis this auricular murmur is always present, though it may be associated with other murmurs, which, as I have shown, may arise in this condition at all the four cardiac orifices. Whenever we have spanæmia we have a tendency to residual dilatation, and consequently to the development of this murmur, which therefore may be heard in chlorosis, chorea, all the exanthematic and other fevers, in syphilis, and all other diseases known to be accompanied with spanæmia, as well as in the exhaustion following excess in tobacco-smoking or sexual indulgence. Where the residual dilatation is the result of extraordinary or unusual exertion—heart strain as it is termed, which may be the result of arterial atherosis alone, the extra exertion being confined to the cardiac muscle—this murmur is often the only detectable sign of the commencement of what may, if neglected, terminate in serious cardiac disease; the only other indications of an affection which may prove so serious being uneasy feelings in the left breast, which are too often pooh-poohed as nervous, air and exercise being recommended for a heart already unable to perform its ordinary lifework. As dilatation is the most serious affection that can befall the heart, and as this auricular murmur is the earliest detectable indication of dilatation, I need not say that I regard it as perhaps the most important sign we possess of cardiac disease, all the more so that it is an early one, while I look upon its detection as a most valuable indication for treatment, a treatment which of course must be varied according to the other concomitant phenomena.

The auricular pulsation between the second and third ribs to the left of the sternum, which is so prominent a phenomenon in many cases of chlorosis, is sometimes so well marked that it is mistaken for serious arterial disease. A case of this kind was sent to me in 1869[32] by the late Dr. Hughes Bennett as one of aneurism of the aorta. This case was one of the first which gave an impetus to my inquiries as to the causes of the murmurs and of the pulsations in the pulmonary area. Treated at first as a case of aneurism, this patient was subsequently recognised to be a case of simple chlorosis with auricular pulsation. She was discharged cured. I have seen her frequently since, and I saw her a few months ago perfectly well and free from all trace of murmur or pulsation. My present resident physician, Dr. George A. Gibson, has succeeded in obtaining tracings of this auricular pulsation by means of an ingenious adaptation of Marey's cardiograph, and his paper will fitly conclude what I have to say upon this subject at present.

[The paper referred to will appear in the ensuing number of THE LANCET.]

[31] Op. cit., pp. 366 and 565, &c.

ON SYPHILITIC PHTHISIS.

BY REGINALD E. THOMPSON, M.D., F.R.C.P.,
SENIOR ASSISTANT-PHYSICIAN TO THE HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, BROMPTON.

THE recent debate before the Pathological Society on the subject of Visceral Syphilis brought out in strong light this point at least with reference to pulmonary syphilis—that, except in the form of gummatous nodules or complicated with tubercular phthisis, syphilitic disease of the lung is of rare occurrence in the post-mortem room; and the united experience of pathologists made it evident that the recognition of the morbid effects of syphilis in the production of pulmonary disease is a matter of considerable difficulty.

Having made some clinical observations on the subject for some years past, I attended the meeting of the Society with much the same views that have been expressed by Dr. Robinson in his "Notes on Syphilitic Phthisis," in THE LANCET of May 5th last, hoping to find in the experience of the pathologists some corroboration and explanation of the observations, which it seemed advisable to withhold until confirmed and interpreted by pathological evidence; but although the subject has occupied attention for the last three years, the post-mortem appearances have been seen so seldom, while the clinical examples have been comparatively numerous, that the publication of such details as have been collected appears to be justified by the fact that this form of phthisis is very slow in action and is seldom *per se* fatal.

In order to be assured that the form of syphilitic phthisis described by Dr. Robinson was identical with that which I believed to be syphilitic, I wrote to Dr. Robinson to ask permission to examine some of his cases. This permission he very readily accorded, and he showed me such instances as he had then under observation. They presented all the characteristics which I have found common to such lesions, and thus showed that we were both agreed on the subject; the same results having been obtained by two observers from different platforms of observation.

Dr. Robinson has approached the subject from the experience of a military hospital. He has tabulated all cases of syphilis which presented subsequently signs of pulmonary disease, and deduced the characteristics of the disease from observations on syphilitic patients. The experience of a hospital devoted to pulmonary affections has elicited the same result from another point of

[32] Ellen C——, admitted to Ward 13, Nov. 4th, 1869.

view and by a different method of approach. It has been found that there are certain cases presenting very definite signs and symptoms which stand out quite distinct from tubercular phthisis, and resemble it in one point only—namely, that of wasting, and that these cases are invariably associated with a cachexia which can only be attributed to syphilis.

As a result of his tabulation of syphilitic cases, Dr. Robinson states that he found two forms in which pulmonary lesions may be presented; one affecting the base, the other and more common being that in which the disease is limited to one or both apices. As the first-mentioned form is, according to my experience, very rare, I shall confine my observations to the more common form.

The following are the signs given by Dr. Robinson as characteristic of the syphilitic lesion. On auscultation, loud harsh inspiration is heard, with expiratory murmur of the same character; the vocal resonance being more or less distinct. These are quite in accordance with the physical signs found in my cases, which I would describe in the following manner:—

Beginning first with the signs obtained by inspection, we may say that the conformation of the chest is not abnormal, and is not indicative of hereditary phthisis. The upper part of the chest, more frequently on the right side, shows a falling-in under the clavicle and above it; this is probably due and proportionate to the want of expansion. It is uniform in the sense of not being more evident in certain places, as occasionally happens in instances of superficial cavities of the lungs. The general emaciation of the body which may present itself in these cases appears to be an index rather of the syphilitic cachexia than proportionate to the amount of lung disease. The percussion note is much altered, being dull in a very marked degree, with a hardness of resistance to palpation, under the clavicle and in the supra-clavicular space, regaining its natural note below after gradually shading off from above downwards. This peculiar, almost imperceptible, gradation of the percussion-note does not, as far as I am aware, belong to any other form of pulmonary disease, and is characteristic; it is not in any degree patchy or circumscribed. As the right lung is more frequently and more affected than the left, the physical signs are all more marked on the right side. By auscultation over the affected portion of the lung, the true vesicular murmur indicative of elasticity is found awanting, and instead of the normal gentle rustle, a dry sound is heard, which may be compared to the sound induced by breathing into a paper bag. There is a harsh papery crumple which suggests a considerable degree of inelasticity. It conveys the idea that the true pulmonary parenchyma has been replaced by stiff unyielding tissue, invaded subtly, but universally, by some hard stroma of gradual growth.

The disease is evidently one of imperceptible growth; it presents no prodromal signs of inflammation and exudation, it gives no hint of a preliminary pneumonia in any known form. If the degree of disease is advanced, then we find marked bronchial respiration with increase of vocal resonance, an expiratory murmur higher in pitch than the inspiratory—all signs showing an increased density of tissue around the bronchial tubes, indications of peribronchial thickening.

These signs are not accompanied as a rule by any indications of destruction of lung-tissue if the syphilitic lesion be not associated with tubercle; and if any moist sounds are heard, they are very sparsely present, and are indicative of an inspissated fluid, suggestive of a local caseation and subsequent liquefaction of a capsuled lobule. In no instance have I been able to detect excavation or rapid softening; and on this very important point depends the prognosis of the disease, which differs *toto cælo* almost from that of tubercular phthisis, for as far as the pulmonary lesion is concerned, a favourable prognosis in all these syphilitic cases may be given, as not only is this form of disease extremely slow, but it is not destructive in character, and may, according to my experience, after having reached a certain point, be considered as almost stationary. It is the more important, therefore, that the indications of this disease should be completely established and recognised.

It is extremely difficult, nay impossible, to put on paper any description of sounds which may be interpreted by others in an identical manner, and the only method to obtain an accurate idea of the physical signs in the cases under notice is the personal examination of the patients; and I feel assured that if anyone will take the trouble to compare the several cases which are now under my care among the out-patients at the Brompton Hospital, and which from time to time present themselves for treatment, he will come to the conclusion that the physical signs are so peculiar and unique that they alone are sufficient to establish the true nature of the case. What form of disease, indeed, can be confounded with this? The only condition which appears to me to approach it at all is that of a healing lung which has been attacked with apicial softening. But although the sounds of a hardening healing lung approach very closely to the sounds heard in syphilitic phthisis, the notion that confusion might arise between the two cases is simply theoretical, for I do not remember to have seen such a case in practice in which other signs indicative of tubercle did not present themselves; nor do I believe that old pneumonic interstitial thickening could produce exactly the signs above described, this form of disease being generally indicated by an absence of respiratory sounds of any kind. Indeed, I should be inclined to consider the pathological conditions of the syphilitic lesion as a generally diffused alteration of the lymphatics, affecting primarily the alveolar tracts, and extending along the bronchial vessels, so as to produce very considerable peribronchial thickening and stiffening. The constitutional disturbance due to the implication of the lungs in the general cachexia is not very severe nor marked by many symptoms. Dyspnœa is the chief, and this is probably due to the interference with the elasticity and consequent expansion of the lung. In the cases that have come under my notice, another well-marked symptom is profuse expectoration; but I am inclined to look upon this bronchorrhœa as a secondary affection, and its frequent occurrence in many cases may arise from the fact that until the attention of the patient is called to the expectoration there is no subjective evidence to induce attendance at a hospital for the treatment of lung disease.

The treatment which has appeared to me to be the most beneficial in these cases is that by large doses of the iodide of iron. I prefer this to the potassic iodide. Certainly, without an iodide, improvement is not obtained, and the use of cod oil is of no great value, not being followed by the same marked improvement which follows its use in tubercular cases. It is not a destruction of lung-tissue which requires to be combated, but a lymphatic alteration of syphilitic character which requires repression.

In this description of syphilitic disease the intention is to corroborate the notes already furnished by Dr. Robinson, and to indicate the landmarks which may lead to a recognition of the disease. If they be confirmed and established by subsequent observations, I venture to think that it will be found that syphilitic phthisis is not so rare as it is now supposed to be, and that many a patient may be saved from what appears to be at first sight a dangerous malady by treatment with appropriate remedies.

CASE OF

SUCCESSFUL TRANSFUSION RESORTED TO FOR SEVERE HÆMORRHAGE AFTER DELIVERY.

BY ROBERT CORY,

ASSISTANT OBSTETRIC PHYSICIAN TO ST. THOMAS'S HOSPITAL;

AND

CHARLES CAMERON,

RESIDENT ACCOUCHEUR TO THE SAME HOSPITAL.

On the afternoon of June 26th, Mr. Cameron was called to Mrs. S. L——, on account of severe hæmorrhage after delivery. She was thirty-four years of age, and had not previously borne children. It was ascertained that she had been losing blood for fourteen days previous to the above date, that the labour had been natural, and that the child, which was living, had been born one hour and a half before his arrival. He found that hæmorrhage was still going on, and that the placenta was adherent to the fundus and anterior surface of the uterus. The woman was in a

state of collapse, the pulse was scarcely perceptible at the wrists, the face and lips were blanched, and the extremities cold. Mr. Cameron removed the placenta as quickly as possible, but much blood was lost while this was being done, and the uterus did not contract afterwards. Some liquor ferri perchloridi fortior diluted (1 vol. to 4 vols. of water) was accordingly at once injected. This immediately arrested the hæmorrhage. Hot-water bottles were then applied to the feet, two brandy enemata injected, and Dr. Cory sent for to perform transfusion.

On seeing the patient Dr. Cory determined at once to have recourse to the operation. The woman was now quite unconscious, and kept throwing her arms from side to side. Dr. Roussel's apparatus was at hand at the hospital. This was obtained without delay, and Mr. Cameron offered his blood. The cup of the instrument was applied over his left radial vein; then the left radial vein of the woman was opened, but this was found too small to admit the cannula for a sufficient distance without splitting. Accordingly the right median basilic was substituted; this was of ample size. When all was ready Mr. Cameron's vein was pricked. The blood flowed readily, and filled the injecting ball rapidly, so that in a very short time ten ounces of blood had passed. At this point the injecting ball began to leak,[1] and, as it was feared air might thus be admitted, the operation was discontinued. Immediately on the passage of the blood the woman seemed to revive, and at the close of the operation was evidently better. The colour had returned to her face and lips, and the pulse, before imperceptible, was now evident. On leaving the house half an hour after this the woman seemed much better, but not long afterwards Mr. Cameron was again sent for, and found her with livid face, restless and collapsed, although there had been no fresh hæmorrhage. Brandy was administered by the mouth, and hot-water bottles kept to the feet.

On June 27th, at 1 A.M., her extremities were warm, she was perfectly conscious, put her tongue out when asked, and said she had no pain except in her head. Temperature 37·8° C. Taking iced milk and brandy as nourishment. Respiration normal. At 11 A.M. she spoke and seemed quite rational; said, in answer to questions, that she was thirty-four, and had been married about a year, and that her child was a girl; she moreover stated that she remembered nothing of what had taken place the day before, after her delivery, until the evening. The temperature was 37·2° C. The urine, as drawn with the catheter, was of a very dark colour, but contained no albumen.

28th.—Complained of great pain in the head.

29th.—There was no evidence of milk in the breasts; the discharge from the uterus was very offensive, and there was tenderness over the abdomen on pressure. The vagina for the next four days was washed out sometimes with a weak solution of carbolic acid and sometimes with Condy's fluid.

30th.—The abdomen was still more tender on pressure. Tongue clean; pulse 120; temperature 38·1° C. The urine continued of a high colour, but contained no albumen.

July 1st.—Very much better. Asked to be allowed to take solid food, as she said she was very hungry.

From this date she steadily improved and left her bed on the 5th of July, only ten days after her labour.

The incision in the skin of the woman's right arm healed up directly; that in the left arm is still not quite healed, but nearly so.

Mr. Cameron felt no inconvenience further than a feeling of want of energy for the following few days. A diffuse ecchymosis appeared on his forearm, but this was of no real moment.

Palace-road, Lambeth, S.E.

[1] On examining the instrument afterwards it was ascertained that the india-rubber of which the injecting ball was made was cracked for a considerable portion of its circumference at its junction with the mountings. There could be no doubt that this was due to a defect in the india-rubber which had been overlooked. In other respects no instrument could have done its work better.

PRESENTATION.—The sum of £450 has just been presented to Dr. Tanner, of Ledbury, as a mark of sympathy and respect upon his leaving his native town for New Zealand through ill health. The Court of Foresters, and other local bodies, also made smaller presentations.

SMALL-POX IN A HEATHEN COUNTRY

(OLD CALABAR, WEST COAST OF AFRICA).

BY ARCHIBALD HEWAN, M.D.

AT the present time, when so much is being said and done about small-pox, it may be interesting to know what is done in other countries; especially what is done to prevent the disease altogether, or to mitigate or to stamp it out when it has made its appearance. I venture to bring the subject forward in the hope that others also who have lived in foreign countries, particularly those not civilised and where vaccination is unknown, may be induced to add their quota of information regarding this dread scourge.

At the time I refer to (1864) small-pox had not occurred in the country for eighteen years. It had hitherto been a very uncommon disease, entirely epidemic. Still sufficient recollection of its ravages remained to make its name and approach dreaded, and to cause intense panic and alarm. On the appearance of the first symptoms, the individual is hurried out of the town, and lodged in some remote and isolated place, generally in the midst of an extensive jungle. If he be a free man or one having slaves, he gets all the attention and care that, with the great dread of contagion, they are able to bestow. If a slave, his condition is altogether different, and he is sometimes utterly neglected and left to die or live as the case may be. In the case of death, the body is not buried, for fear, they say, of infecting the ground, and so perpetuating the disease; but it is placed on a platform raised above the ground a foot or so, and there left to its fate.

They have *no means of cure*. The disease is left to run its course. It is alleged, however, by an intelligent old chief, who remembers when a young man to have seen an epidemic of small-pox, that there was a man in the country at that time who cured persons afflicted with the disease by a plant which grows in the country. The man would never tell his secret to anyone, and it died with him.

In order, however, to modify the virulence of its attack, whenever the disease has fairly made its appearance, *inoculation* is had recourse to, and is pretty extensively practised. It is performed by mixing the matter with palm oil before it is inserted. The seats selected for inoculation are various: at one time on the foot—about half an inch in a line above the bifurcation of the first and second toes,—on the back of the wrist, or between the eyes. Eight days after the operation the disease begins to affect the system. First the throat becomes affected with a feeling of constriction and dysphagia, accompanied by pains in the head, neck, loins, and joints, with increasing pyrexia. Four days after these premonitory symptoms the pustules begin to appear, beginning on the breast, then on the face. One case which I saw had many on the breast, and only one on the face. The severity of the fever lasts for eight or nine days, but the patient continues more or less under the disease for a month. The most of the cases that I was privileged to see had already recovered, and had characteristic marks on their faces and breasts, but, with one or two exceptions, *no pitting*. To ensure this they cover the parts affected with burnt clay pulverised and mixed up into a paste with water. The marks which the pustules leave are for the most part darker (and this upon the negro) than the ordinary healthy skin.

The first case that particularly attracted my attention was that of a woman with round dark spots scattered over her face and breast, darker than the general integument. On asking her the cause, she said it was the effects of small-pox that she had had *after inoculation*. There were no *pits* to be seen. Another case presented itself—namely, that of a young man with several marks on his face. His whole skin was very black. I saw no pits; and therefore, in order to test the accuracy of his statement, as well as to gather from him more information than he seemed disposed to give—for it is such a horrid disease, and they are so full of superstitious dread, that it is with difficulty and much tact one can get them to converse at all on the matter—I expressed my doubts of his having had true small-pox, since there was no pitting, which is such a common result; whereupon he turned up his face, and showed me the free

odge of the right ala of the nose, on which there had been a pustule, and which, owing to the difficulty of the paste sticking on there, had left a pit.

Some deaths do occur, but this is comparatively rare. More deaths take place when the disease occurs idiopathically; and here, in cases of recovery, the marks resulting from the pustules are more numerous, altogether demonstrating the advantages of inoculation where vaccination is unknown.

As a charm against the disease, scarlet cords with white feathers stuck through them are hung around the neck of every one, and the several roads to the villages and towns are guarded by festoons of fetishes having scarlet-coloured fruits interspersed through them. This reminds me that it is alleged of one John of Gaddesden that, for the cure of his patients, he placed them in a room whose walls and curtains were made red for the purpose.

There are other methods employed to ward off the disease which are purely superstitious, and have no bearing whatever on its treatment. For example, an unusual quiet is observed during the day; then at dusk a sudden shout and noise, which is kept up pretty much all night by those appointed to watch the town, believing the disease to be a monster, or, to use the words of Scripture, a "pestilence that walketh in darkness," and that may be scared by some unlooked-for and strategic assault.

Lastly, there is the killing of the first one attacked, by way of sacrifice and propitiation, I presume, to the presiding genius of the town, who permitted the disease to begin its ravages. This custom, however, occurs in one family only.

Chester-square, S.W.

ON A

DILATABLE TAMPON FOR USE IN DEEP-SEATED PRIMARY AND SECONDARY HÆMORRHAGE AFTER LITHOTOMY.

BY G. BUCKSTON BROWNE, M.R.C.S. ENG.

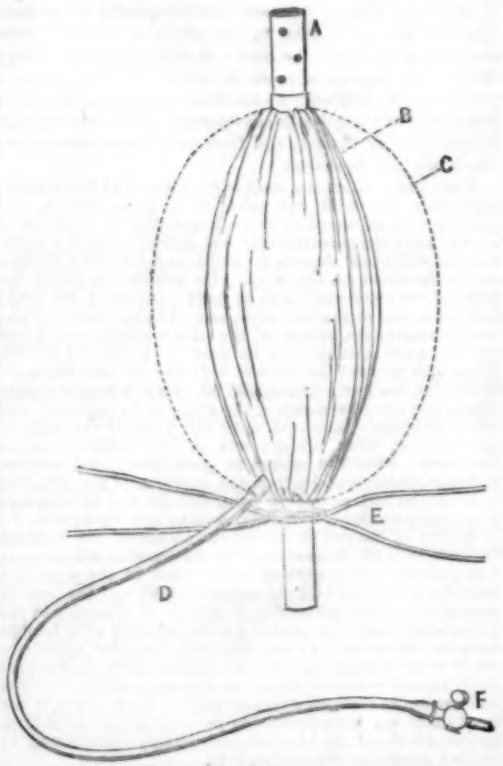
DURING the two years and a half that I have assisted Sir Henry Thompson in his private practice, I have been his staff-holder in a large number of cases of lateral lithotomy, and closely associated with him in their after-treatment.

I need hardly say that in the practice of an accomplished lithotritist only the worst and most unpromising cases are reserved for the operation of lithotomy; as, for example, where the stone is very large, or where certain diseases of the urinary organs or an irritable and excitable temperament counter-indicate the performance of lithotrity, the proceedings of which under such circumstances may sometimes prove tedious. Hence, in the majority of the cases to which I refer, the stone was either very large or irregularly shaped, and a bold and free incision, necessarily involving considerable risk of hæmorrhage, was required. Consequently, we sometimes have had to deal with severe bleeding, although I am glad to say that no case has been lost from this cause.

Every surgeon is familiar with the chief modes of arresting hæmorrhage in a wound after lithotomy. If accessible, the bleeding vessel is tied; but it is often so deeply placed that the greatest possible difficulty is experienced in securing it; besides, it is not always visible. When the vessel cannot be secured by forceps or ligature, a tenaculum may be carried under the bleeding point, which is then tied, and the instrument left in the wound. Failing the success of these means, a "tube-en-chemise" is introduced, and the interior plugged firmly with strips of lint. But this method, useful though it be, is never easy of application, and is not always practicable. Moreover, the interior of the wound is irregular, the lint is permeable and allows the blood to ooze through its substance, and, as pressure cannot be increased or diminished at will, plugging in this manner not unfrequently fails.

It therefore occurred to me to adopt the following plan. An ordinary lithotomy tube is surrounded by a thin, air-tight india-rubber bag, which can be inflated through a small flexible rubber tube. The lithotomy tube is introduced in the usual manner, and then, by inflation of the bag, every recess of the wound is compressed, and the hæmorrhage thereby instantaneously and completely arrested. Such, at least, has been its effect in two cases in which sharp hæmorrhage occurred to Sir Henry Thompson recently: and I have his authority to state that the control was perfect, the bleeding ceasing absolutely from the moment that the bag was inflated, and both cases made a rapid recovery. As occasion requires, the pressure may be easily modified by increasing or decreasing the amount of inflation. In order to obviate the slipperiness of india-rubber in contact with the wound, as well as to prevent overdistension of the bag, I first had it enclosed in a well-fitting case of swan's-down calico, but when this came to be removed, on the fourth day, it was found to adhere rather firmly to the granulations, and I therefore substituted thin muslin.

The figure represents the apparatus. The bag is made four inches and a half long, and, when blown up to the fullest extent, measures eight inches in circumference. A is the tube, B the india-rubber bag, flaccid for the purpose



of introduction. The dotted line, C, represents the bag when inflated; D is the tube, fitted with a stopcock F, through which the bag is filled; E marks the strings, which are secured to a band round the waist in the usual manner.

The instrument is made for me by Messrs. Mayer and Meltzer, of Great Portland-street.

Harley-street.

HEALTH OF IRELAND.—During the quarter ending June 30th, there were registered in the 795 registrars' districts in Ireland, 37,280 births, and 25,710 deaths, representing an annual mortality of 19·3 per 1000. The deaths show a small increase over the average rate for the June quarter. Those from the eight principal zymotic diseases amounted to 2206, or 8·6 per cent. of the total deaths registered.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

MIDDLESEX HOSPITAL.

LODGMENT OF A LARGE PIECE OF STICK IN THE ORBIT OF A CHILD; COMPLETE PARALYSIS OF ALL THE OCULAR MUSCLES; REMOVAL; RECOVERY.

(Under the care of Mr. GEO. LAWSON.)

E. M——, a healthy boy of three years of age, was admitted into the hospital on June 20th, 1877, suffering from the following symptoms:—The lid of the left eye was dropped over the globe without the slightest power of raising it. On lifting it with the finger the globe was seen to be bulged directly forwards about a quarter of an inch. The eye was quite fixed in the centre of the orbit, from complete palsy of all the ocular muscles, the pupil widely dilated, and, as far as could be made out in so young a child, absolutely blind. At the inner and lower portion of the orbit was a small fistulous opening, at the site through which the stick entered, and from this orifice there was a continued thin discharge.

The history which the mother gave was that seven weeks previously the child was riding in a perambulator, and playing with a long piece of stick from the dried branch of a tree, when the perambulator was jerked against a stone, and the child was thrown forwards, and fell with his face on to the point of the stick. On raising the child, the point of the stick was found to have penetrated the inner and lower side of the left orbit, and the grandmother, who was in attendance, pulled out the stick from the wound, and she was quite satisfied that no part of it was left behind. From that moment the mother says she believes the sight of the eye was lost. The upper lid in a few days began to droop, and the movements of the globe to be impaired, and these symptoms increased until she brought the child to the hospital, when the eye was in the condition above described. The child seemed in good health, and had not suffered constitutionally from the condition of the eye; but although he had no severe pain, still he was uneasy, and slept badly at night, frequently waking and crying out.

Taking all the symptoms and the nature of the accident into account, Mr. Lawson came to the conclusion that there was probably still a portion of the stick in the orbit, and that the paralysis of all the ocular muscles and the levator palpebræ, and the protrusion of the globe, were due to inflammatory exudation excited by the presence of a foreign body in the orbit. If the blindness was the immediate effect of the accident, as the mother imagined, it was probably caused by direct injury to the optic nerve; but if it had gradually come on with the palsy of the muscles, it was most likely due to an increasing pressure on the nerve from lymph effusion. Mr. Lawson accordingly determined to make a search for the foreign body.

The child having been put under chloroform, a probe was passed into the sinus, at the inner and lower side of the orbit, but nothing could be detected by it. Guided by the probe, an incision was made along the floor of the orbit, into which the little finger was introduced, and it at once came down upon a small hard point. A pair of fine forceps was then passed into the wound, and after a little trouble a piece of stick exactly corresponding to the woodcut was removed.

The child recovered from the operation very rapidly. There was no suppuration. The wound quickly healed, and in four days he was able to leave the hospital. The protrusion of the eye subsided, the levator palpebræ and the ocular muscles gradually regained their powers, and three weeks after the operation the lids were open, and the movements of the eye almost restored; but, as far as could be ascertained, the eye was blind.

LONDON HOSPITAL.

DISORGANISATION OF CARPAL JOINTS AND WRIST, WITH SLOUGHING OF SOFT PARTS, IN A GOUTY MAN; AMPUTATION OF FOREARM; RECOVERY.

(Under the care of Mr. RIVINGTON.)

JAMES E—, aged sixty-two, was admitted on May 2nd. He stated that he had been a steady and moderately healthy man, but a severe sufferer from gout for the last twenty years. When admitted he had a severely inflamed hand, suppurating over dorsum. A splint was put on, poultices applied, and free irrigation practised, but the sloughing extended rapidly.

By May 17th the extensor tendons had entirely sloughed, the wrist-joint was opened, and the adjacent tissues were completely disintegrated; the patient's health had suffered much, and a great deal of pain had been experienced in the hand and arm.

On May 18th, with Mr. Rivington's approval, the hand was removed by Mr. Allden, the house-surgeon, together with two inches of the lower end of the radius and ulna, antero-posterior flaps being made; silver sutures were used, and the stump dressed with oil lint. The carpal bones were found to be very extensively necrosed. Patient recovered well from operation.

Next day there was but little discharge, but the stump was a good deal inflamed, though not painful. Evaporating lotions were applied. There had been no rigors or vomiting. Bowels open, tongue red and dry, appetite fair. A week after the health was much improved; there was very little discharge, and the flaps were uniting well, and considerably less inflamed and red. On June 3rd the patient was not so well; he slept badly, the appetite was failing, pulse quick, tongue dry. Although there were no rigors, there was a feeling of nausea, and he complained of great weakness. The stump, however, looked very healthy. In two or three days these symptoms began to pass away, and he was stronger and the stump looked healthy. On June 23rd the stump was nearly healed; a little piece of dead bone was removed, the general health was much improved. On July 1st he was up, the wound was well healed and the general health good.

In addition to the affection of the hand the patient was suffering on admission from a disorganised metacarpo-phalangeal articulation, belonging to the great toe of the left foot. The limb was placed on a McIntyre splint. Under the influence of rest the joint became anchylosed, the ulcerated surface over it cicatrised, and the sinus leading to the joint closed.

SUSSEX COUNTY HOSPITAL, BRIGHTON.

ACUTE RHEUMATISM; HYPERPYREXIA; TEPID BATHS; DEATH.

(Under the care of Dr. KEBBELL.)

SARAH H——, aged twenty-eight, was admitted on March 24th, 1877. The previous health had been good; she had been married eight years, and had four children, the youngest of which she was nursing up to the time of her admission. About three weeks before, after getting wet, she had a severe cold, followed by pains in the back, head, and lower extremities.

On admission the pain was confined chiefly to the knees, ankles, and feet, which were slightly red and swollen. The heart and breath-sounds were healthy; tongue moist and slightly coated; abundant perspiration with sudamina on chest; pulse 108; morning temperature 101·2°; evening temperature 101·8°; urine, sp. gr. 1040, acid, high coloured, with copious deposit of lithates. A little extract of belladonna with glycerine was applied to the mammæ, which gave no further inconvenience. Ten grains of compound ipecacuanha powder were given at bedtime. The affected limbs were covered with cotton-wool.

March 25th.—The pain and swelling had extended to the hands, wrists, and elbows, otherwise she was much the same. Evening temperature 100·5°; bowels confined. To repeat the compound ipecacuanha powder, and to have at once a draught containing sulphate and carbonate of magnesia. To take twenty grains of bicarbonate of potash, ten of nitrate of potash, in water, every four hours.

26th.—In much the same state. Evening temperature 101·8°; pulse 106; bowels confined. To have a calomel and colocynth pill.

27th.—Face flushed; tongue coated at base; urine, sp. gr. 1040, acid, contains some albumen, with copious deposit of lithates. Complains of pains in right iliac region, increased on pressure. Pain in joints much the same. Perspirations continue. Has had a restless night. Two doses of the calomel and colocynth have been given without effect. Pulse 120, full; morning temperature 102°; evening temperature 101·8°; respiration 34. To have a castor oil enema, and to take ten drops of the sedative solution in a saline draught at night. To continue with the alkaline mixture.

28th.—Bowels have been moved by enema, and she has passed a more quiet night. Says she is free from pain; but the face is much flushed; heart's impulse much increased; valvular sounds harsh, loud, and abrupt; no murmur or increased cardiac dulness. Pulse 128, full and bounding; respiration 36; tongue coated at base; evening temperature 103; morning temperature 105·9°. Calomel pill and saline draught.

29th.—Morning temperature 104·5°. Has passed a restless night with some delirium, but is quite collected this morning. Face much flushed; countenance anxious and distressed. Increased action of heart continues, but without any murmur. Says she has no pain, but feels very uncomfortable and restless. Other symptoms much the same as yesterday during the periods of high temperature; the skin reported to be dry and hot. Eight leeches to be applied to the region of the heart; to omit alkaline mixture, and to have an effervescing ammonia mixture every four hours. The following notes were taken on this day by Mr. Herbert Smith, house-surgeon:—3.30 P.M.: temperature 110°; pulse 154; respiration 45. Had a fit of screaming about 3 P.M., which lasted for a few minutes, after which she became unconscious. Limbs perfectly paralysed; little or no sensation. Put into a bath of a temperature of 92° at 3.45 P.M.; five minutes afterwards temperature in axilla 107·4°; pulse 152; respiration 36. At 4 P.M., temperature in mouth 106·8°. Water cooled by ice at 4.10. Temperature in axilla 103·4°; pulse 158. 4.15: Taken out of bath. Pupils rather dilated, conjunctivæ, especially the left, almost insensitive; temperature 100·7°. Had a little brandy and water given. 5 P.M.: Temperature 101·8°. Spasmodic twitching of lips, left hand, arm, and foot. 5.30 P.M.: Hand tightly clenched; temperature 102·2°. 6.30: Has just had a violent spasm, in which her knees were nearly drawn up to her face. Has a wild, restless look, with spasmodic movements of limbs on both sides; temperature 103°. The convulsive attacks continued for several hours, after which, towards night, she became more tranquil and partially conscious, to the extent of answering yes or no. On one occasion the urine was collected and found to contain a slight trace of albumen. The temperature did not rise above 101·2°. She was much troubled with cough, throat rattle, and raised some tough mucus, but when questioned said she had no pain, excepting a little in the shoulder. Face much flushed, with generally dry skin; pulse and respiration quiet. Was able occasionally to take a little milk and other light nourishment. She never rallied from this state of collapse, and died on the 31st, the second day after the bath.

At the post-mortem examination all the organs were found healthy, with the exception of the base of the right lung, which was in the second stage (red hepatisation) of pneumonia, involving about a third of its substance. There was not even any congestion of the brain, nor did the heart show any signs of disease.

Remarks by Dr. KERBELL. — The causation of hyperpyrexia in acute rheumatism is at present merely conjectural, and we have not sufficient data to enable us to come to any decided conclusions as to the proper method of treatment. In fact, it is only within the last few years, since the body-thermometer came into use, that such cases have been detected, having probably been formerly attributed to inflammatory affections of the brain. In this case there was nothing to account for the high temperature from any external cause. The weather was cold, and, though the limbs were enclosed in cotton-wool, the patient was not kept uncomfortably warm. Had this been a solitary case, it might perhaps, with some show of reason, have been put down to the suppression of the milk.

What was the cause of death in this instance? It could hardly be attributed to the pneumonic affection of the lungs, which were only affected to about one-sixth of their extent; while the most critical eye could scarcely have detected disease in any other organ.

I am inclined to the opinion that the high temperature of acute rheumatism is the effect of some violent effort of the system to get rid of the poison from the circulating fluids, there being either some defect in the eliminating process, or a very large accumulation of such poison in the system, and that the immediate cause of death was, in this instance, the result of some form of blood-poisoning. Supposing this view to be correct, the application of cold, as applied through the medium of the bath, requires to be used with great caution, so as neither to reduce the temperature of the patient too much or cause too great a shock to the system. Instances of the animal temperature rising above 110° in the axilla are, I think, very few. Dr. A. T. H. Waters, of Liverpool, in his clinical lectures mentions two cases of temperatures of 109·7° and 110·6°. Both patients died; the bath was not used. Several cases have been recorded in which the tepid bath appears to have been applied with very fair success, but in no instance that I can call to mind, in which recovery took place, did the temperature exceed 109°. Four cases are published by Dr. James Andrew, in the St. Bartholomew's Hospital Reports, vol. x., 1874, p. 337, in which the temperatures reached 108·6°, 107·6°, 105·5°, 104·9°, and whose lives Dr. Andrew considers were saved by the application of the bath. Supposing the bath to be the proper treatment on these occasions there is no doubt that it ought to have been applied earlier in the above case. On the 28th the temperature ran up to 105·9°. Had she been put into the bath on that day possibly her life might have been saved.

NORTHAMPTON GENERAL LUNATIC ASYLUM.

TWO CASES OF TOTAL BLINDNESS AFTER SCARLATINA OCCURRING IN THE SAME FAMILY.

(Under the care of Mr. BAYLEY.)

FOR the notes of these cases we are indebted to Mr. H. P. Potter.

M. P—— and L. P——, sisters, aged respectively sixteen and thirteen, have been under treatment at the asylum for two years.

Eight years before admission, these two girls, a brother, and their father suffered from scarlet fever, the younger girl having the disease in a malignant form, with cervical abscesses. The fever in neither of the cases here reported was followed by dropsy or albuminuria, but some months after recovery from the scarlatina, it was noticed that the two girls had a weakness of the sight, which increased till the time of admission. Their memory also became affected, they were dull and melancholic, and refused to read or play about like other children. This mental condition has continued to get worse during the last six years. They never at any time complained of pain in the head. No history can be obtained of mental disease, fits, or affection of sight in any members of the family.

On admission, both children were short for their age, but well-formed and healthy; the eyes were prominent, pupils dilated; they had a vacant expression, and the sight was very defective. The peculiarities were noticed in both cases. The mind was very feeble; they talked incoherently, and did not appear to know the simplest facts. Neither child had any memory. The mental condition of the younger girl was the worse, and the sight was not so good as her sister's.

From this time their health remained fairly good, but the sense of vision gradually became more impaired. The conversation continued irrational, and there was no im-

provement in the mind. For the last eighteen months the elder has had frequent attacks of epilepsy with mania, averaging several in the month. The fits are very severe, and leave her low and feeble, amounting sometimes to a semi-comatose state for a couple of days. At the present time (August, 1877) they are well nourished and healthy-looking. Both patients walk about, feeling their way; they are quite insensible to any object approaching the eye. There is a total want of natural expression; the eyes roll unmeaningly. The pupils are equal and much dilated; irides insensible to strong light, even in the sunshine they remain fixed; the pupils, however, appear to vary from time to time.

The condition of the mind has gradually been getting worse. They now say "yes" and "no" indiscriminately to questions asked them; neither child will hold any conversation; in fact, they appear quite demented and imbecile.

Dr. Buzzard, who kindly examined the eyes, found that the disc was pale, but not the bluish-white of atrophy, ischæmia and retinitis being absent. There were several irregular patches of pigment scattered over the fundus of the eye.

Remarks.—It is impossible to say with certainty that these cases of loss of sight are due to the attack of scarlatina, but the occurrence of amaurosis after this disease has been before reported, and as the affection of the eyes appeared soon after the attack, there seems very little doubt that here such is the case.

The absence of any marked changes in the interior of the eye would perhaps point to the existence of a centric lesion as being the cause of the blindness, and this would be supported by the coexistence of mental derangement.

ABSTRACT OF

THREE LECTURES ON TERATOLOGY.

Delivered in the Theatre of the Royal College of Surgeons,

BY R. THOMPSON LOWNE, F.R.C.S.,

LECTURER ON PHYSIOLOGY AT THE MIDDLESEX HOSPITAL MEDICAL SCHOOL, OPHTHALMIC SURGEON AT THE GREAT NORTHERN HOSPITAL, ETC.

LECTURE II.

MR. PRESIDENT,—I had intended to make some observations in my last lecture on the different forms of abnormal variation in the number of parts, but was precluded from doing so by want of time. It is in plants that we are able to distinguish these phenomena most easily, probably because these organisms are more simple than animals. I have therefore selected some preparations from your museum of the different forms of abnormal variations in plants.

This first specimen (No. 1 in the catalogue) is a walnut with three carpels in the fruit instead of two, the normal number. It is especially interesting from the fact that none of the allies of the walnut have three carpels; it cannot therefore be regarded as a case of reversion, but it appears as a case of mere arbitrary variation; and this is the more remarkable, as it is well known that variation in number is especially prone to occur in the case of multiple organs, whilst it is exceedingly uncommon when the number of parts is not great. It is familiar to all that the stamens, for instance, of polyandrous plants vary so much in number that a dozen specimens of the flowers of such a plant, taken at random, will all have a different number of stamens. On the other hand, a dozen or a thousand specimens of a plant with but four or five stamens will all have the same number, and will very seldom exhibit the slightest difference in this respect.

The next specimen is in marked contrast to this. It is the fruit of the common garden pea, which has normally but a single carpel. In this there are three—a number which is found amongst the less typical forms of the order from which the more highly differentiated Leguminosæ are supposed to have descended by those who advocate the theory of descent. This is therefore possibly a case of reversion.

Cases of simple variation in number also occur in the animal kingdom, but chiefly in the case of multiple organs. Examples of this kind are seen in the number of vertebræ and of ribs, especially in those animals in which these parts are at all numerous. Instances in which such variation can be traced to reversion are, however, far from common, if they occur at all.

The third form of variation in number to which I will draw your attention, Sir, is seen in what is known as metamorphosis. Since the time of Goethe it has been known that the various structures of the flower in plants are modifications of the foliar organs, and it is well known that these organs are capable of being changed into homologous parts; for instance, in all garden flowers the stamens are frequently converted into petals, and in monstrous forms all the parts of the flower are sometimes converted into green leaves. The nearest approach to this phenomenon seen in the animal kingdom, if we except the lower forms of life, is perhaps the tendency of the upper and lower limbs to vary in the same manner, as when the tarsus in a bird becomes heavily feathered on its outer side so as to resemble the wing; or in the tendency, observed first, I believe, by Meckel, for the muscles of the upper limb to assimilate in their arrangement to those of the lower limb, and for those of the lower limb to approach in arrangement to those of the upper. This is clearly a case in which the tendency of homologous parts to become similar is manifested. Variations in number from the atrophy or non-development of a part are very frequent, both in the animal and vegetable kingdoms. This condition scarcely needs further comment from me now.

The last condition to which I shall now refer is of the highest importance in the elucidation of a large group of teratological phenomena. It consists in the multiplication of parts by bud reproduction. This specimen is an ear of wheat in which the culm branches just below the inflorescence. The condition is evidently the result of the development of two buds where only one is normally formed. The tendency to this form of multiplication seems to be universal in both the animal and vegetable kingdoms, although its occurrence in the higher animals is always an abnormal phenomenon. As is well known, it is, however, the normal and often the most frequent form of reproduction in all the more simple forms of life. The process is seen in its most varied conditions amongst the coral polypes, and these exhibit in a normal condition most of the phenomena of this manner of development which is so extremely abnormal and remarkable in the vertebrata. Our museum affords a beautiful series of corals exhibiting this form of reproduction. This specimen is a simple coral polype with a single tube or theca, during life surmounted by a single ring of tentacles and possessed of a single sack-like stomach. The next specimen is a coral in which a number of additional individuals have been produced by the budding of the original polypes. Each individual is perfect in all its parts and independent, except that they are united by a common stem. In this third coral the same process has occurred, but apparently in a more hurried manner, so that the individual polypes are fused together, as if the process had occurred in so hurried a manner that they had not sufficient time to be properly developed. They are fused into a single sinuous crown—a condition that is developed normally to its highest degree in the remarkable brain coral, where a vast number of buds are fused, if I may use the term to designate the union of parts which were never separate.

The production of two symmetrical buds in the place of one has been very happily named dichotomy, and this has been defined by Dr. Maxwell Masters as the production of two growing points in the place of one. This double ear of wheat and this frond of the hart's-tongue fern are examples of dichotomy, and there can be no reasonable doubt but that this double fœtal shark is an example of the same phenomenon.

The manner in which such double embryoes are formed has been the subject of much discussion. The earlier observers supposed that these malformations originate in double-yelked eggs. Wolff was the first who observed the early condition of one of these double embryoes in the egg

of the common fowl, and since his time a dozen such embryoes have been seen by different observers. It is in fishes, however, that the most important observations have been made, especially by M. Lereboullet, who carefully investigated the phenomena of the development of double embryoes in several hundred cases.

I may remind you, Sir, that in fishes the egg consists, as it does in birds, of a large food yelk, with a small protoplasmic yelk floating on its surface; and that this latter, after segmentation, forms a kind of hemispherical cap over the upper portion of the yelk; this is the blastoderm. The edge of this cap forms a thickened rim, from which the first trace of the embryo grows like a bud. This gradually extends across the blastoderm. Lereboullet has traced the development of the double embryoes of fishes to the production of two such buds, either in close contact so as to form a single double bud, or from separate portions of the blastodermic rim. He further likens the production of these cellular buds from the non-differentiated cellular blastoderm to the budding of the bodies of the lower polypes. As the development of the ovum proceeds, the blastoderm gradually spreads over the whole food yelk, the opening in the blastoderm contracts, and the caudal extremities of the embryoes which remain attached to the rim are drawn together, ultimately uniting into a single or apparently single tail. When the blastoderm covers the whole yelk, the opening in its interior portion is converted into a mere pore, and the rim is gradually absorbed as the development of the primitive embryoes progresses. This explains the fact that double fish are always double in front, but are never single in front and double behind; a condition of frequent occurrence in the double embryoes of the higher vertebrata.

Some of the phenomena of this abnormal process of development are most remarkable, and have been observed with great care by Lereboullet. Amongst these the strong tendency to revert to the normal type is perhaps the most striking. This occurs either by the more or less complete atrophy of one of the embryoes, or by the gradual fusion of the two. The complete fusion of the two embryoes into a single fish may take place either from the absorption of the adjacent halves of the two by the atrophy of the parts of which they consist, and the soldering together of the remaining portions, or by the gradual fusion and subsequent disappearance of the intermediate parts. The manner in which this occurs may be well studied in the case of the union of two adjacent sense-capsules into a single sac, or of the cerebral vesicles of two adjacent embryoes into a single vesicle and the subsequent development of a single or only partially double sensory organ or brain, as the case may be. In some cases M. Lereboullet observed the joint effect of these two methods of union occurring in the same embryoes. In these the two heads first became united by the fusion of the cerebral vesicles, so that an embryo was produced with but one head and one tail, but with two bodies, which ultimately coalesced by the atrophy of the adjacent halves of the bodies, and the union of the remaining halves.

In birds and mammals the manner in which a double embryo is formed on a single blastoderm is somewhat different, owing to the fact that the first trace of the embryo in them is not produced as a bud from the edge of the blastoderm, but as a differentiation of a more central portion of the cellular expansion which covers the yelk; I cannot help regarding the difference, however, in the same light as that of reproduction by fission and budding, between which, as Professor Huxley and others have clearly shown, no definite line can be drawn amongst the lower forms of life, in which these processes normally occur; nor, so far as I can make out, can any definite line be drawn between the two phenomena in the production of double embryoes, the one passing by insensible degrees into the other.

It is not only the whole body that is liable to become double by this process of dichotomy, or the production of two growing points instead of one, but a portion may be so affected. I may remind you, Sir, that the limbs and digits when they first appear are mere cellular buds, and, like other cellular buds, they are liable to become dichotomous. Sometimes this process of reproduction of digits occurs with such vigour that a whole crowd of additional digits result, as in this specimen, the foot of a fowl, in which there are more than twenty toes. When additional digits are developed it appears as if the abnormal digits take upon them the type of the nearest normal digits, and so strong is the tendency to symmetry that the normal and abnormal digits often form a symmetrical double structure; hence the abnormal digit frequently has the appearance and characters of the corresponding part belonging to the opposite side of the body. I do not say that all double limbs are developed in this way, but the great majority bear unmistakable evidence of such an origin. Some, however, of those in which the doubling is very complete are, as I shall show in the next lecture, the consequence of the fusion of two embryoes. This is, however, a comparatively rare cause of this form of abnormality.

Many naturalists, amongst others Charles Darwin, are inclined to regard the production of such additional digits as a form of reversion to an anterior type; and facts are not wanting which seem at first sight to support this view. If the phenomenon only occurred amongst those animals which have less than five toes, the extreme irregularity and the frequent occurrence of characters in the additional digits assimilating them or rendering them identical with those of the opposite side of the body, would, I make bold to think, negative this view. These specimens of horses' feet bear very strongly on the point; they exhibit an additional middle toe; but the normal splint bones are present, showing that this toe is not the result of the redevelopment of either of the normal digits which are suppressed in the horse, but which were developed in those types from which, under the theory of descent, the horse is undoubtedly descended. The occurrence of additional digits in pentadactyle animals is, to my mind, fatal to the view. As no existing or extinct mammal bird or amphibian is known to have more than five digits, unless the small tubercle on the hind foot of the toad, and some other tailless amphibia, be regarded as such, and no reptile except the extinct ichthyopterygia possesses more than five digits, the extreme improbability of the reversion of the human embryo to so remote a type needs no comment, when we remember the great frequency of this kind of malformation, and put by the side of it the fact that there are no instances of abnormal reversion to types many thousand times less remote. Indeed, I would make bold to say that, although I have looked long and earnestly for evidence of reversion amongst malformations, I have been unable to find a single case of any malformation that can fairly be regarded as an instance of reversion, except in some forms of variation, especially amongst plants, which, like variations in the plumage of birds, or in the colour and markings of animals, should not, I think, be considered as malformations. Perhaps I shall express my meaning best by saying, I know of no instance of reversion to a remote type. I cannot but hold the view that was first distinctly enunciated by Sir James Paget, that we see the same process whether we contemplate the development of the individual, the reproduction of a lost limb, or the repair of the most trifling injury. So I think we see the same phenomenon in the superabundance of the most trifling part, in the addition of a limb, and the doubling of the entire organism—namely, a tendency to vegetative reproduction; a tendency which the cellular embryo or limb-bud apparently possesses in common with the lower grades of living things, whether plants or animals. In a limited sense we may perhaps regard this form of development as a reversion; a reversion to a physiological process, but not as a reversion to a former type; a reversion in the simple non-differentiated cellular embryo to a tendency shared in common by all similarly constituted structures amongst both animals and plants.

There are many facts in connexion with polydactylism as this condition is called, which are of very considerable interest and importance; some not very readily explained. The great comparative frequency of this condition in the horse is especially anomalous. Since variation in number is more frequent in those parts which are but little modified, and which are repeated, multiple parts, we should expect that the horse would be least frequently subject to polydactylism; yet no other domestic animal, indeed, so far as I know, no mammal, except man, exhibits this abnormality with nearly the same frequency. The tendency for all four extremities to be affected in the same manner is also very strong, more especially in pentadactyle mammals. Darwin has collected and tabulated the cases of 46 persons who had an excess over the normal number of digits. If, in all the cases, all the extremities had been affected, there would

have been 92 affected hands and 92 feet; as it was, 73 hands and 75 feet were affected. The strong tendency in this malformation to be transmitted to the offspring, and the fact that such supernumerary organs are very liable to be reproduced after removal, are too well known to need more than a passing reference. It frequently happens that insects which do not develop their limbs until their final metamorphosis exhibit double limbs; but in this case the limbs first appear as small cellular buds under the integument, and these, like other similar cellular structures, occasionally exhibit dichotomy.

REPORT
OF
The Lancet Special Commission
ON THE
NEW HÔTEL DIEU AT PARIS.

THE opening of a new hospital in a city which is equally famous for its physicians and its architects is an occasion which is sure to interest the medical profession in all countries. But when that hospital has been the subject of discussion for more than a decade, is intended to replace an institution whose historic interest transcends that of all similar establishments, and has cost a sum of money which is wholly without parallel in the history of hospital construction, our profession will expect not only to be interested, but to derive much valuable information from the consideration of the result of so much enterprise, discussion, and expenditure of money.

The new Hôtel Dieu is in close proximity to the old building, which is in course of demolition. It occupies a plot of ground in the Ile de la Cité, 170 metres long by 150 metres wide—rather more than five acres in extent. This plot of ground is bounded on all four sides by the public streets: to the north-east by the Seine and the Quai de la Cité; to the north-west by the Rue de la Cité, in which are situated a barrack and a public office; to the south-east by the Rue d'Arcole, which is occupied by dwelling houses and shops; while to the south-west it abuts on the Place du Parvis Notre Dame—a spacious square, flanked on one side by the Cathedral and on the other by the old hospital, the walls of which are fast disappearing. The building occupies almost the exact centre of Paris, so that its situation is such as to conduce greatly to its utility; and, considering that it is in the middle of a great city, it must be conceded that the site is a singularly airy one. The ground now occupied by the new hospital has been devoted to the habitations of men for probably a thousand years. There is evidence to show that the old Hôtel Dieu, in its primitive form, was existing in the ninth century, and the present Cathedral of Notre Dame was commenced in the thirteenth; so that it may be assumed that the Ile de la Cité must have been densely populated long prior to the construction of these buildings. To build the hospital there were removed a crowd of narrow, miserable streets, and while digging the foundations a large quantity of human bones were discovered, so that it is probable the site was at one time partially used as a cemetery. Many of these bones we actually saw in one of the cellars of the new building. A humerus which we narrowly examined had not undergone much change. The compact tissue had disappeared from a couple of patches on the head and the outer condyle, but otherwise the bone had a perfectly normal appearance; its various grooves, processes, nutritive foramina, and markings were plainly visible, and it did not seem to have lost weight to any great extent. The soil on which it was found was singularly dry and porous, and there was no sign of adipocerous change. It is very difficult to estimate the age of these bones, and any attempt to do so might involve centuries of error. We should not have mentioned these facts did they not seem to provoke the question of the advisability of building hospitals on sites which must be thickly crusted by the "dust of ages." The soil is dry, the water-supply is from a distance, there is abundance of vegetable growth in the gardens (as will appear presently), and the sick wards are raised some twenty feet above the ground, so that one need not, we think, anticipate any evil from the choice of so historic a position.

The general plan of the hospital is the same as that of the Lariboisière. It consists of a rectangular court 160 metres by 35, from which there extend laterally on either side five pavilions (ten in all). Of these pavilions, four are devoted to patients, two to administration, two to the religious sisterhood, one to the scientific laboratories, and one is not at present in use. The three central pavilions on either side consist of three patient floors, with a basement below and an attic storey above. The end pavilions are one storey lower (two storeys with basement and attic). The buildings surrounding the central court, which connect the pavilions with each other, are of the same height as the pavilions themselves, so that the building forms itself into nine court-yards, the central cour d'honneur and eight subsidiary ones. Each of these courts is completely closed in on three sides, and all of them are also partially closed on the fourth. This arrangement must check the free circulation of air. The main entrance to the building is in the Parvis Notre Dame, and it must be admitted that from this point, and, indeed, from all others, the external appearance is not such as to provoke admiration. It has the look of a barrack, and is almost without ornament of any kind. The roof is low and ugly (the original design, we believe, which involved an extra storey, that was partly built and then removed, was more picturesque), and the two huge ventilating shafts, made of boiler plates, and which inevitably catch the eye, resemble nothing so much as the turrets of an ironclad ship. There is one beauty it has which all must appreciate, and that is the beauty of good workmanship. The white stone of which it is entirely constructed has been carefully dressed, and the masons have done their work most admirably. The solidity and excellence of Parisian building are acknowledged, and it would seem as though the *ouvriers* had put forth their strength to make the Hôtel Dieu (intended to benefit their own class) a standing monument to their merits.

The unattractive appearance of the exterior is fully compensated by the beauty of the interior. Passing through the entrance door we find ourselves in the cour d'honneur, the spacious central court, having a garden in the middle. At the distant end is the chapel, as yet unfinished, and on either side stretch the long regular line of glittering white buildings, ornamented with a triple external corridor supported on light pillars and arches, which serve as recreation grounds for patients. Immediately in front of the spectator is a connecting colonnade crowning a palatial flight of steps by which the garden is reached. The garden itself, with its bright green turf and gay flower-beds laid out with true Parisian taste, sets off to the best advantage the simple but elegant buildings which surround it. The general effect is magnificent, and one could imagine oneself in the courtyard of a palace not unworthy of the Grand Monarque.

Besides the central garden, there are four others in the courts, enclosed by the six main pavilions, so that the patients of every ward have the advantage of a most cheerful outlook. The architect has succeeded, partially at least, in combining beauty with sanitary principles. That they can be combined there is no room to doubt, and it may be that we have in some portions of the new hospital the germ of a style of architecture which shall hereafter be honourably distinctive of the age we live in. The building is far from being a perfect model of beauty; it is still further

from sanitary perfection; but there are points which will be evident to every intelligent observer where elegance and wholesomeness have come most happily in contact.

We may now examine the building in detail. Entering by the main gate in the Parvis Notre Dame, we find ourselves in a specious vestibule, about 30 ft. by 80 ft., supported on white stone columns. This vestibule has nothing above it, and serves merely as a covered connexion between the two main wings of the building. To the left is the men's side of the hospital; to the right is the women's. The first two pavilions, right and left, are devoted to the administration, and are filled by reception rooms for patients, consultation rooms, offices, and the private apartments of the resident medical and administrative officers. There is nothing in these two pavilions which calls for remark, so we will proceed to examine the patients' quarters. Adhering to the right, we ascend a flight of steps, and find ourselves in a long covered corridor, having the cour d'honneur to its left, and the range of wards &c. to the right. Proceeding some 180 or 190 feet along the corridor, which we will speak of as the longitudinal corridor, we arrive at a door which marks the end of the third pavilion, the centre pavilion of the group; and, since the arrangements here are typical of those elsewhere, we will describe them minutely. Passing through the door, we arrive in a very spacious vestibule, which contains the staircase ascending to the top of the building. On the right hand we have (1) a dirty-linen shoot, (2) passages leading to wards, (3) lift going from basement to the second floor. To the left hand we have a door leading to wards, and a staircase descending to the basement. In front is a door leading to the ward in the pavilion. Passing through this door we find ourselves on one floor of the pavilion proper. This floor is about 110 ft. long (we have been unable to get the architect's plans, and our measurements are approximate only), and the first twenty feet of it is occupied by ward offices. The arrangement of these offices is very peculiar. On either side of the passage, which is 18 ft. or 20 ft. long, leading from the vestibule to the ward, are two doorways. The first on the right is a passage leading to the watercloseta, the first on the left is the doorway to a little staircase, of which more presently. The second door on the right leads to the room of the sister in charge (having a window commanding the ward), and the second door on the left to the bath-room. These rooms and the w.c. passage are only a little more than half the height of the ward, and they have a room above them to which the little staircase leads. This room occupies the whole width of the pavilion, and is built over the ward offices and the intervening passage; and since the passage is some 18 inches higher than the bath-room or sisters' room, it follows that the floor of this upstairs room is of two levels, being 18 in. higher in the middle than at the sides. This little room, with the irregular floor and little twisting staircase, varies in height from about 4 ft. 6 in. to 6 ft., so that only at the sides can one stand upright. It is meant apparently for a ward store-room, and the ones we visited were occupied by rags, chamber-pots, bed-cradles, splints, bandages, and hair-trunks, not neatly arranged, but thrown pell-mell upon the floor. Order and cleanliness in such an apartment are impossible. It will serve as a lumber-room, a reservoir for dust, and as an *oubliette* for every unsightly thing, and the dark corners beneath the little staircases will be used no doubt as "convenient" places for stowing away disused articles of various kinds. We cannot but regard this arrangement as a most unfortunate one, and one which constitutes, in a new building, a grave sanitary scandal.

The arrangement of the watercloseta is peculiar; they are situated not in the pavilions, but in the longitudinal building; they are approached by two passages, one opening into the pavilion passage and the other into the passage of the longitudinal building, and in the angle formed by these two passages is the lift. This arrangement has been adopted in order that the same closets should serve both for the pavilion wards and the wards of the longitudinal building. The watercloseta have windows on one side only, and there is no possibility of a thorough draught unless one of the passages be used as an exit or entrance for air. Each watercloset contains two seats, two urinals, and a sink for washing bed-pans. The "système Jennings" has been used throughout. Owing to the very unwise hurry which the authorities have shown in occupying their new building, the sanitary fittings are not everywhere finished, even where they are in use. We found a closet-pan without a seat, and the reader may imagine how some of the mechanical details had become obscured. We also observed uncovered pipes in many places, and behind them and around them we saw egg-shells, orange-peel, paper, &c. The male urinals are not provided with a beak, and urine is consequently slopped upon the floor. Every closet we visited was scarcely clean. The closets are provided with large French windows, and when these were open there was no disagreeable smell; but it is evident that in winter, when the windows are entirely or partially closed, the state of things will be otherwise, and every time the passage doors are opened the air of the closet must find its way through them. We cannot conceive why the very simple device of the turret has not been used. The closets of the new Hôtel Dieu are retrogressive rather than progressive. There is one further peculiarity we must mention. The closets on the ground-floor have a special staircase leading to the garden, and, since the closet windows open on to the garden, they are much exposed.

The bath-room has no cross ventilation, and there seems to be no adequate provision for the patients' ablutions.

Next as to the pavilion wards. These are 90 ft. long, 28 ft. wide, and about 17 ft. high. There are windows on either side and at the far extremity. The floors are of oak; the walls of Parian cement. The ceiling (also of Parian) is slightly vaulted. The windows are rounded at the top, and reach nearly to the summit of the ward. The windows are in two portions, a rectangular and a semicircular. Both open valvewise. There are seven openings for fresh air on either side, just above the skirting-boards, each eight inches square, closed by gratings. These allow, probably (subtracting the space occupied by grating) an available aperture of about 40 square inches, giving a total of 560 square inches for the ward, and 24 square inches for each of the twenty-four patients. There are apertures of exit in the vault of the ceiling, of the same dimensions, and corresponding with the apertures of entry. There are no valve-openings conducting the air obliquely to the ceiling either in the windows or the walls; neither are there any entrances for air beneath the beds, nor vertical tube-inlets. The ward is lighted by two gas-lamps, so contrived that the products of combustion are carried off. The heating is effected mainly by three hot-water coils which stand at intervals in the centre of the ward. These, of course, are valueless for aspirating the air of the ward. There is an open fireplace in each ward at the far extremity beneath the end window, but this probably will only be lighted upon rare occasions. There was no open fire burning in any of the wards which we visited. We cannot but think that an open fireplace, in which old dressings can be immediately burnt, is a most important aid to the sanitary well-being of a sick-ward. Even in summer, we think, a small fire should be kept up for this purpose. We encountered, in the passage of one of the watercloseta, a bowl of offensive pus-sodden dressings, the odour from which was recognisable not only in the ward, but on the grand staircase as well. This fact illustrated most forcibly the bad arrangement of the closets and the necessity of a fire. At the far extremity of each ward are two cupboards, narrow, dark, and deep. They are partly contrived for the sake of hiding water-pipes, and these pipes run visibly through the cupboards, affording numerous chinks for the accumulation of dust from which it cannot be dislodged. The chimney-piece of the fireplace projects slightly above the window-sill in front of which it is placed, and here again we have a lurking-place for dust. We noticed that the ventilating inlets can be closed or opened by anybody who has a fancy for doing so, and no provision has been made against the meddling of patients.

In the midst of an expenditure lavish to a degree hitherto unheard of, an economy has been practised which is certainly strange. *The furniture of the old hospital has been moved into the new.* One of the spring-mattresses on which a patient was lying was covered with dust, the composition of which was matter for speculation. Old tables, old chairs, old bedside pedestals seem all out of place in this palatial edifice. "*They have taken care to import the old bugs,*" said a French gentleman to us, *apropos* of this arrangement. The beds are all furnished with bed-curtains, a practice which is indefensible, and should have become obsolete.

Returning from the pavilion ward to the main vestibule, we will examine the arrangements in the longitudinal building, and will take as a sample a length stretching from the base of one pavilion to the base of the next. In the centre of this connecting piece is the salle de conversation, which we should call a patients' day-room. These rooms constitute the most striking feature of the new hospital. They are about 30 ft. square and 16 or 17 ft. high, floored with polished oak, with a handsome oak dado and oak doors. On one side they face the gardens, on the other they open on the corridors of the cour d'honneur. Those on the ground floor are approached from the gardens by a flight of stone steps, 12 ft. wide, with handsome balustrades. At either end they communicate with the wards. These rooms are decorated in Pompeian colours; a stencilled pattern runs above the dado, and the ceiling is deeply panelled and picked out in red and blue. A handsome fireplace, set in scagliola, adds greatly to the general effect. What will the French peasant think when he luxuriates in these magnificent apartments? Assuredly they will make the charms of convalescence doubly sweet, and tend to soften some of the miseries of sickness. On either side of the salle de conversation are small wards which accommodate in the aggregate twenty beds. On one side is a ward for two beds leading into another for six beds; on the other side are two wards for two beds separated by two very small wards, meant, we suppose, to accommodate one patient each, but too small, we think, even for this. All these wards and the salle de conversation are *en suite* and communicate with each other. The arrangement by which each of these small wards is made into a passage-way is, we think, absolutely bad. An enormous amount of space is occupied by partition walls; there are twice as many doors as would be otherwise necessary, and anything like effectual separation or seclusion of cases is absolutely impossible. Passing from the salle de conversation through three of these small wards we come upon a passage having on one side the ward kitchen and dirty-linen shoot, and on the other the watercloset and lift, and thus we gain the big pavilion-vestibule. The unit we have described is repeated throughout the building, so that we may content ourselves by saying *ex uno disce omnes*.

The ward kitchen calls for no remark. There are four amphitheatres for operations, two on each side of the building. These theatres are small, they have windows only on one side, which do not descend near enough to the floor for the sake of giving a horizontal light, which is necessary for certain operations. There is no skylight, and the ventilation is, we fancy, insufficient. Attached to each theatre are two or three subsidiary rooms. These theatres are in the longitudinal building, and occupy space which is elsewhere filled by small wards. The two end pavilions on the right hand are occupied by the sisterhood, and these two pavilions enclose a garden which is especially devoted to the use of the sisters. The ground-floor of one of these pavilions is arranged as a clean-linen room. It is, in fact, a ward containing linen racks instead of patients.

Of the two end pavilions on the left-hand side, one is at present only occupied on one floor by a temporary chapel, the other is devoted on the ground-floor to a mortuary and post-mortem room, and on the first floor to a lecture room and laboratories. The dead-house is in direct air-communication with the main corridors of the hospital, and is neither particularly well lighted nor particularly well ventilated. The dead are to be conveyed from the wards to the lifts, thence to the basement, below the level of the mortuary. From the basement they are raised by a special lift to the mortuary, and there is a second special lift, by which they can be raised from the post-mortem room to the lecture room above. This complicated arrangement has been devised in order that the patients may be saved the disagreeable spectacle of their deceased comrades being carried along the corridors of the hospital. So far it is good, but it is not good that the dead should be conveyed unnecessarily to the basement, and we think it would have been a simpler arrangement if the post-mortem room and lecture room had been placed on the same level. The dead-house and post-mortem room occupying the ground-floor of a pavilion which is separated only by a distance of 45 ft. from the adjoining pavilion, it will not be advisable to use this adjoining pavilion for patients. It is not at present occupied (except in one floor by the temporary chapel), and we trust it will remain unoccupied until a better situation is found for the dead-house. The court enclosed by these two end pavilions is occupied by the steam-engine and the boilers of the heating apparatus.

Having dealt with the patient floors we may descend to the basement, which is entirely occupied by various offices. This basement extends under the whole of the building, and there is, in addition, a subway connecting the two sides under the centre of the cour d'honneur. There are six hydraulic lifts for raising provisions &c. to the floors above, and round the whole extent of the basement there runs a tramway, so that the conveyance of coal, provisions, &c., will be made as easy as possible. Making the tour of the basement, and beginning on the right of the entrance, we come first to the wine-cellars, which are of very great extent, and which stretch entirely under the first two pavilions (right and left). The second and third right pavilions and the intervening building are occupied by the larder, provision store, kitchen, and servants' dining-hall. The provisions arrive in the first right-hand court, which is closed on its fourth side by the coach-houses and stables. Passing the servants' dining-hall we come upon the women's baths, as yet incomplete. It is strange that on an area of between five and six acres no better situation could be found for baths than the basement. The inconvenience of this arrangement is illustrated by the fact that a huge flue has had to be made right through the buildings to carry off the smell of sulphur &c. and the steam. We observed also in the kitchen a similar flue piercing the entire building to carry off the fumes from the frying-pans. Beneath the fourth right pavilion is the dirty-linen room and the patients' vestiary, where their clothes are kept during their sojourn in the hospital. The fouled linen is carried away every day to the laundry, which is at a distance. The foul linen shoots are not used. The far end of the building is occupied by a range of cellars of vast extent, and crossing over to the left-hand side we come upon the boilers for heating the building, and the steam-engine for ventilating it. The basement of the fourth left-hand pavilion seems occupied by workshops; that of the third is, as yet, not appropriated, and the intervening building is devoted to the men's baths —the counterpart of the women's on the opposite side. The space between the third and second left-hand pavilions is occupied by a huge dispensary and "ptisannerie," or kitchen for making decoctions, and beneath the second pavilion is a drug-store. Passing by a range of cellars we arrive at the point whence we started.

The attic storey is of vast extent, and, like may other parts of the building, is as yet unfinished. It consists of a series of low rooms lighted only by skylights. If it were all used for sleeping rooms there would be accommodation here for 300 or 400 persons. Some of it is used for servants' bedrooms, but the greater part of it is not appropriated, and we cannot see to what use it can be put. We visited a large servants' dormitory over one of the wards, and were struck by the general neglect of hygienic principles. A long low room, lighted only by skylights and without means of proper ventilation, hot in summer, cold in winter, stuffy always. It is certainly strange to find one system of hygiene for the sick and another for the healthy—one contrived that the sick may get well, and the other that the healthy may become sick. Truly this is a levelling age. The water-closet adjoining this room was a curiosity. It was not finished, but had been already too much used. The floor of the urinal was some inches deep in urine, and the flies in crowds were buzzing round the heap of ordure deposited and depositing in the pan of the closet, which was one of those rough stand-up affairs so common in France. Here, under the same roof with the sick and in direct air-communication with them, was a condition of things which, in the present day, should not be tolerated anywhere, and least of all in a building which has cost 34,000,000 francs, and which ought to be a model of good sanitation. A very active and intelligent sanitary inspector, and one who is not afraid to interfere with some of the most dearly hugged of the French customs, will be needed if this new palace of the sick is to be kept in anything like a wholesome condition.

The heating of the building is entirely effected by steam and hot water. It is true that here and there there are open fireplaces, but these are intended rather for cheerfulness and ornament than for warming purposes. The boilers are in the basement, and the hot water and steam circulate

through 47,000 metres of copper piping, or rather more than twenty-four miles. There is no doubt, it is said, of the economy of this method, in spite of the prime cost of piping and plant and the inevitable repairs which will be necessary. The great drawback to such a method is that it is of no use for ventilating purposes, since it warms the air without producing currents like a fire. This being so, the wards have to be supplied with fresh air entirely by artificial means. Air is drawn, by means of a screw, from the top of the building, and propelled, by the use of a powerful steam-engine, to every ward in the place. The foul air escapes by special ducts from the wards, and travels to the roof. We doubt if the inlets and outlets in the wards are sufficiently large, and we think it will be necessary to propel the air with undue rapidity, causing draughts, in order to keep up the necessary supply. There are, we suppose, some twenty-four miles of air-duct in the building, and we can only trust that it will be somebody's special duty to keep these clean.

This hospital has cost 34,000,000 francs, of which one-half was the price of the building. As the building is very far from completion, this sum will probably have to be increased. The English equivalent for the sum admitted to have been spent is £1,460,000, or, let us say, a million and a half of money; and, since the accommodation is sufficient, at the outside, for 500 patients—420 is the actual number provided for at present,—the cost works out at £3000 per bed, or, if we reckon the cost of the building alone, at £1500 per bed. This is indeed a startling sum, but it must be remembered that the space allotted to administration is very much larger than in our hospitals. The chapel, no doubt, was a costly item also; but after making every allowance, and even acknowledging that the building is very magnificent, in some respects it certainly seems to have cost a most unwarrantable sum of money. The design was modified after the partial completion of the building, and the expenses of demolition were added to those of construction. Much of the cost has been brought about by glaring faults in design, and by allotting an enormous amount of space where space was not necessary. As an instance of the first we may take the fact that one pavilion has been rendered practically useless by being placed at a distance of only 45 feet from the pavilion containing the dead-house. In the basement and in the attics we have an enormous amount of space which is not, and never can, we think, be profitably used for any purpose. Then, again, the highly finished and expensive *salons de conversation*, which are twelve in number, afford an area of something like 10,800 superficial feet for the recreation of convalescent patients, in addition to the enormous corridors. This space is certainly extravagantly great, and is amply sufficient for the day accommodation of two-thirds of the patients, whereas accommodation for a tenth part of them was all that was necessary. It is of great importance that, in designing a hospital, the accommodation of all kinds should be *sufficient*. To provide too much is scarcely a less error than to provide too little, as thereby the cost of cleansing and of management is enormously increased. This has been the great error of the designer of the new Hôtel Dieu. The space in the building which is of no other use than to increase expenditure might almost be measured by the acre. Our clever neighbours have deservedly a great reputation for their power of devising economical and convenient arrangements; but in the present instance they have met with but ill success, and it is a matter for very great regret that this magnificent establishment cannot serve as a model for similar institutions. To attempt to inhabit a building before it is finished is a great error. To fill a new building with old furniture is also an error. To expose patients to the smell of "fresh paint," and to the evils arising from incomplete sanitary arrangements, is scarcely justifiable.

The new building, however, has its political aspects. It may be that the expenditure has been purposely lavish, to counterbalance, as it were, the cost of the new Opera. The French peasant is intended to see that his sufferings form a subject for consideration equally with the luxuries of the rich. He will luxuriate in the gorgeous *salons*, and will feel content perhaps with all the Governments who have had a hand in the construction of the new building. He will shout "*Vive* Somebody," and it may that the political value of the new Hôtel Dieu may be of great service to that party which is sufficiently adroit to take advantage of it.

FRENCH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

THIS Association held its sixth annual session at Havre during the last week in August. The medical section was presided over by M. Courty, and many interesting papers were read. Some of these we may have occasion to refer to again, but at present our space allows us to do little else than enumerate those which were most important.

M. DROMSART, of Louvain, gave an elaborate account of Miner's Nystagmus, based on his personal observation of twelve cases. He attributes the occurrence of this disorder to fatigue of the superior rectus and oblique muscles, and sometimes of the internal rectus; from the strained position of the eyes, which are kept constantly directed by the miner above his head. He recommends iron, strychnine, and galvanism, combined with daylight work, as the best means for combating the condition, which in all cases was associated with anæmia and some loss of accommodating power.—Dr. SEGUIN, of New York, appeared in the capacity of delegate from the American Medical Association, with a paper urging Uniformity in Medical Observation. Dr. Seguin had laid the same subject before the British Medical Association, and completes his mission by laying his scheme before the International Congress at Geneva. — M. PAUL RECLUS read a paper on Luxations of the Femur due to paralysis, in which he stated that such cases must be deducted from the group of so-called "congenital dislocations," with which they had been confounded. They occurred upon infantile paralysis affecting some group of muscles about the hip, and the action of the antagonist muscles brought about the luxations. A case of Femoral Aneurism, treated, in the first instance, by electrolysis, subsequently by ligature, and in which death was due to suppuration around the sac, was read by M. LECADRE.—MM. FRANCK and TRAQUAST dealt with the action of Chloral upon Respiration and Circulation, an experimental inquiry of intra-venous injection of this substance. They concluded that chloral acted directly upon the endocardium, and that the sudden arrest of the heart's action was due to irritation of the afferent nerves in that membrane, and thence reflected through the medium of the intracardiac ganglia to the inhibitory nerves. The arrest of respiration produced by the drug was produced through the medium of the medulla and vagi nerves, it not taking place when the latter were divided. The relations of Ataxy and Traumatism was the title of a paper by M. PETIT. It was presented by M. VERNEUIL, who himself contributed a paper upon wounds in Alcohol-diabetes.—M. POTAIN contributed a paper upon the indications for Thoracentesis, in which he pointed out that the occurrence of pulmonary hyperæmia masked the signs of abundant effusion, and in advocating cautious aspiration, suggested the conjunction of a manometer with the aspirator, to indicate the changes in the intra-pleural pressure during the performance of the operation.—M. LEUDET read a paper upon Pulmonary Tuberculosis in Hysterical Subjects; and M. LANCEREAUX one on the Arterial Lesions of Syphilis.—Dr. SOUTHEY exhibited and described his capillary drainage tubes for anasarca. His communication was warmly received.—M. COURTY gave the results of one hundred observations, in normal and pyrexial states, upon the temperature of the palm of the hand, as compared with the axillary temperature. He found great variations in the palmar temperature in health, ranging from 26° C. (79° F.) to 37° C. (98.6°F.) in some subjects, and influenced by the external temperature, exercise, rest, and other causes. In fever, however, the palmar temperature registered the same as the axillary, so that it appeared that the relative rise was greater at the peripheral part than elsewhere during pyrexia. Another paper, which we reserve for future notice, was by M. BROCA, on Cerebral Thermometry. It was very suggestive, and dealt with the subject in a masterly manner.

VACCINATION GRANTS. — The following gentlemen have received from the Local Government Board awards for efficient vaccination in their respective districts:—MR. A. Megget, of Scarborough, £32 2s. (third award); Dr. Newham, of Winslow, Bucks (fifth time).

THE LANCET.

LONDON: SATURDAY, SEPTEMBER 15, 1877.

Now that the medical service of the army is being incorporated as a distinct branch, it may be opportune to plead that similar or equivalent organisation should be conceded to the Poor-law Medical Service. However consoling may be the conclusions which superficial economists seek to draw from the recent returns of pauperism, it is abundantly evident that much, if not the whole, of the apparent improvement is produced by a policy of crowding out of sight, instead of eradicating, the evil so much deplored. There is no valid reason to believe the army of bread-winners has been recruited from the multitude of paupers. Persecuted in one parish or union, they have fled to some other, and finding "out-door relief" refused, they have resorted to new expedients of a parasitic existence not more creditable or socially satisfactory than those which have been officially frustrated. In truth, the measures of repression adopted by keen administrators who decline to help the needy outside the workhouses are directed chiefly against the class it is important to succour—those requiring temporary relief,—while the "habitual paupers," who are not unwilling to take up their abode in the "house," are scarcely incommoded. If any reduction has been effected by the means employed, it has been at the expense of the most pitiable of the poor, not the indolent and hereditary pensioners, for whom real charity has no compassion and little care. The supposed "success" of the refusal to afford out-door relief is one of the most significant illustrations of the folly of judging by appearances—a sure way to be misled and deceived.

To no class of close observers is the fatuity of striving to put down pauperism by declining to give occasional and partial aid, more clearly manifest than to medical officers labouring among the poor. It is not of course in their interest to support the system of relief out of the workhouse. District medical officers, who form by far the largest part of the Poor-law service, would be relieved by pressing the new policy to its extreme limits! Nevertheless it is abundantly evident that by withholding succour from the sick in their homes, and making the condition of help removal to the workhouse, the administrators of public charity are pursuing a false course, and inflicting grievous personal injury. The causes of pauperism in this country are three: first, the hereditary taint, which must be met by bold measures, and the boarding-out system, wisely applied; second, misfortune, mismanagement, or personal idleness, calling for diverse methods of treatment, and requiring the scrutiny of official visiting from house-to-house and inquiring into cases, in a fashion widely different from that adopted by the relieving officers and their deputies with rare exceptions; and, third, disease. This last source of the evil is, beyond question, the most prolific and formidable of all. It is with this the medical service is directly concerned, and we have no hesitation in asserting that, under existing conditions, justice to the ratepayers or the poor is simply impossible. Boards of guardians can only base their opinions of the system at work upon the returns made to them, and the community of ratepayers must draw their conclusions from the weight of the burden imposed in the shape of local taxes. Neither of these indications is trustworthy, and a policy shaped on the lines they suggest must lead to action from hand to mouth. The difficulty of the day is met more or less ungraciously, but there is no serious attempt to reduce the magnitude of the evil permanently, or to minimise the burden of the future.

Only the Poor-law medical service can grapple with the worst evils of pauperism. Disease in one or other of its malignant forms lies at the root of most of our social grievances. A healthy people is, speaking generally, a happy people. Even the indolence that breeds crime often has its root in the lassitude of ill health. Whether we look to the immediate or the ultimate interest of the community, the sick poor should be cured as rapidly and completely as possible, and the seeds, the beginnings of disease, ought to be sought out and destroyed before they originate a crop of disasters, personal and social. Obviously it is out of the question that this service should be rendered by a corps of men with vast districts under their care and totally inadequate stipends for the discharge of their onerous duties. Let any economist set himself seriously to inquire how a system of "medical relief" like that in operation under the boards of guardians scattered throughout the country and the central authority at Whitehall *must needs work*. The result of his speculations can scarcely be reassuring. So much has been said and written on this subject that it may appear useless to urge further considerations or broach stronger arguments in favour of reform. That may be so, but we have a proposal to make. It is certainly time the subject was placed fully and fairly before the Legislature. A Royal Commission on the organisation and working of the Poor-law medical service would probably elicit some new facts, but the process of inquiry by Commission is cumbrous, and not always successful in discovering the truth. We invite medical officers of districts and workhouses to furnish us with a concisely-stated expression of their views on this great question in its threefold aspect—first, the work actually done in *reduction* as well as *relief* of pauperism; secondly, the drawbacks of the existing system; thirdly, the remedy which suggests itself to practical men regarding the matter as members of a philanthropic profession and as citizens sharing the financial burden of pauper relief. If members of the Poor-law service generally will take the trouble to put us in possession of their views on these subjects, we will collate and compile them in a tabular, or some convenient, form, and the collective opinion of the service can then be placed before the Legislature, with good hope of securing for the whole subject that sound practical consideration it so urgently demands. The statements from district and workhouse officers should be in our hands by the 20th of October, in order to give ample time for digest and reduction to a concrete form.

We have great hope that this attempt to elicit an expression of mature opinion on one of the most pressing subjects of the day will be productive of permanent good, and in that confidence we ask the co-operation of members of the service, the great body of which will, we believe, be

not unwilling to take some personal trouble for the public advantage. The points above specified are those to which it is desirable attention should be specially directed, but we shall be glad to receive supplementary suggestions upon other topics which may commend themselves as tending to the general issue it is sought to gain.

CONSIDERABLE alarm has very naturally been excited by the number of cases of hydrophobia which has been lately reported from various parts of the kingdom. Of these many are undoubtedly genuine instances of the disease. In some there is, however, ground for doubt as to the accuracy of the diagnosis. The latter cases are sufficiently numerous to attract, from time to time, the attention of the public, and even to engender a false impression that the actual frequency of the disease has been considerably overstated. We fear that such a belief has not sufficient foundation—that the public conviction as to the prevalence of this dreadful disease is rather below than above the mark. The problem of its diagnosis has, however, been brought by some recent cases so prominently before the public, that it is worth while to review the grounds on which the recognition of the disease is based, and the circumstances in which an error in diagnosis is most likely to occur.

In doing this we assume that we may take for granted the existence of the disease—a question which has been many times discussed in our columns, and which may now be considered as closed. The specific nature of hydrophobia rests on the same evidence as does that of any of the acute specific diseases, and, indeed, on more definite evidence than does that of many of them; and recent observation apparently shows that it has a pathological anatomy almost as definite as its symptoms. The investigations into the condition of the nerve-centres in hydrophobia, which were lately communicated to the Pathological Society, showed similar lesions in three out of four cases—lesions which, it appears from these and other observations, may apparently be regarded as characteristic of the disease. It is not improbable, therefore, that microscopical investigation may become of great importance as a test of the accuracy of the diagnosis in doubtful cases.

It is not surprising that the purely nervous symptoms of hydrophobia should be occasionally simulated by other of the protean forms of "functional" nervous disorders. There is no doubt that many cases of organic as well as functional cerebral disorders have been diagnosed as hydrophobia, and the error discovered, if at all, only when too late. The existence of what has been termed by TROUSSEAU a "mental" hydrophobia—a condition in which emotion engenders symptoms resembling somewhat those of the real disease—is well established. Many unquestionable cases of this character are on record. On the other hand, we commented not long since on a case in which arachnoid hæmorrhage was diagnosed during life as hydrophobia. Causes of error in such cases are not far to seek, even apart from the equivocal character of the symptoms themselves. The lurid horror which surrounds so dreadful a disease may entice the practitioner, and still more the friends of the patient, to a diagnosis. There is always a tendency to recognise that which is rare, new, or alarming in phenomena, which, impartially considered, have no unusual character. The points of resemblance are unconsciously magnified, and those of difference are overlooked. Moreover, just as prophecy has often no small influence on its fulfilment, the diagnosis of hydrophobia conduces to its apparent verification. For the symptoms of hydrophobia are largely mental; and the horror which a suspicion of the disease excites in the sufferer, reflected as it is in the conduct of those by whom he is surrounded, helps to determine symptoms of mental disturbance into a definite course resembling that of the disease in question.

The diagnosis of every disease turns mainly on its cause, its symptoms, and its course, and upon these points the diagnosis of hydrophobia essentially depends. It is probable that genuine hydrophobia never arises in man without inoculation by virus, although the poison may obtain entrance into the system, in rare instances, in other ways than by the bite of a rabid animal. But it is rare that the diagnosis of hydrophobia is affected by this consideration. The apparent cause is generally present; the suspicion in doubtful cases arises from the fact of the preceding bite. The period of incubation is not unfrequently, however, an element in diagnosis. Is a bite, received some years before the onset of the supposed symptoms, to be considered as evidence of the probable nature of the symptoms themselves? Does the lapse of years exclude the possibility that the supposed symptoms can be related to the bite? A careful survey of the facts, which are well authenticated, certainly favours the conclusion that the lapse of even several years does not exclude the possibility, although it may diminish the probability, of a causal *nexus*. The remarkable and proved variations in the time of incubation make it impossible to deny that a much longer interval may elapse between the reception of the poison and the appearance of the first symptoms. If a disease which may appear in three weeks may be delayed, as it certainly may, for nine months, there is no inherent improbability that a much longer period may elapse before its manifestation. We have corresponding phenomena in some other diseases in which, as in syphilis, years may elapse between the reception of the poison and the occurrence of the structural changes which it produces.

A more accurate attention to the symptoms of true hydrophobia would prevent some of the mistakes which have certainly been made in its diagnosis. It is especially important to recognise the two sets of symptoms—those of spasm, which constitute the characteristic feature of the first stage of the disease, and the peculiar delirium which marks the second. It is important also to note that the spasmodic phenomena are those of respiratory spasm. It is no mere spasmodic inability to swallow—it is a convulsive movement involving the larynx as well as the pharynx, involving all the muscles of inspiration, and frequently spreading more widely, and it is excited not merely by the act of swallowing or the sight of water, but by many other peripheral impressions. In mental hydrophobia the spasm is pharyngeal only; there is not the catch in the breath which is generally conspicuous from the first in genuine cases. The furor which succeeds is less distinctive, for although paroxysmal and strikingly peculiar in character,

its features resemble those of some other forms of maniacal disturbance in which the same sudden wildness, the same frenzied attempts to bite, and even barking sounds, may be observed.

The course of the disease, however, commonly gives an unequivocal proof of its character. The succession of spasmodic and delirious phenomena is rarely if ever seen in the simulated disease. The duration of the malady may also furnish a strong evidence of its nature. Genuine hydrophobia rarely lasts more than four days, although exceptions to this rule are certainly more frequent than TROUSSEAU was disposed to allow. Another sign of some importance is derived from the temperature, which is more frequently raised in the genuine than in the spurious affection.

It is probable that the disease most frequently mistaken for hydrophobia is a rapid form of acute mania. In this the stage of respiratory spasm is wanting, the convulsive element is little marked, and there are not the strange alternations of lucidity and frenzy which characterise the terrible delirium of hydrophobia. These cases are, of course, to be distinguished from the mental hydrophobia to which we have referred. It is probable that the frequency of the latter is overestimated. Those who have been exposed to the chance of inoculation frequently imagine that they have the disease, but it is rare that this hydrophobophobia induces symptoms resembling, except in the most superficial manner, the genuine malady, and we doubt whether there are any authenticated instances in which a disease unquestionably emotional in its origin ran a rapid course to a speedy death.

We have endeavoured in these remarks to indicate some of the grounds for reasonable doubt in the diagnosis of the disease, and also the grounds on which the diagnosis must be based. We believe, however, that errors in diagnosis are less common than many unprofessional, and even professional, critics assert. It is more likely that a case of genuine hydrophobia would be regarded as one of spurious mental disease than that the latter should be deliberately diagnosed as an example of the real malady.

In the face of the inutility, only too obvious, of all methods of treatment hitherto tried, it becomes a pressing question, considering the increasing prevalence of the affection, whether all has been done that can be done for its prevention. Opinions will differ as to the degree of prevalence of the disease which would justify a further restriction on the luxury of keeping dogs. But there is one investigation which should certainly be undertaken, and which might prove of much practical importance. It is as to the class of dogs to which the disease in men can most commonly be traced. It is not improbable that the result would show that a large proportion of the cases are due to a class of dogs which might easily be restricted without any grave interference with the liberty of the subject, and that thus the recurrence of the disease might be rendered much less frequent.

THE occurrence of the so-called inhibitory actions of certain nerve-centres is sufficiently familiar to all physiologists. The existence of nerves naturally conducting impulses of this nature, which was first established by the observations of the brothers WEBER on the pneumogastric nerve, and the power of this nerve, when stimulated, or when divided and its distal extremity stimulated, of arresting the action of the heart in diastole, has been supported by all succeeding observers, as well as by the well-known fact that a sudden or profound moral emotion will arrest voluntary movements, whilst sudden pain inflicted on a sensory nerve will induce a similar arrest. The direction of the fibres conducting such inhibitory impulses, and the position of the centres from which they emanate, have been but little studied. An interesting paper has, however, just appeared in which these points are investigated by M. LANGENDORFF, in the first part of the new series of DUBOIS REYMOND'S *Archiv de Physiologie*. He commences by observing that the influence by which reflex actions are inhibited may start either from the brain or from the periphery. The cerebral, or, as LANGENDORFF prefers to call it, the psychical, form of reflex inhibition is a specific function of a certain part of the brain, and during life is in a constant condition of mean tension. His experiments show that the seat of this mechanism is not to be looked for in the lobi optici alone, but that the cerebral hemispheres are, to some extent at least, implicated, and, in fact, that the inhibitory reflex power of the brain is an essential factor of the intelligence. In accordance with this is the fact that new-born animals have comparatively little power of cerebral reflex inhibition, which is first acquired when gradually maturing consciousness subjects the actions of the body to control.

That form of reflex inhibition which proceeds from the periphery is manifested when some sensory irritation (besides that causing the reflex action) is conducted to the spinal cord. It is unlikely, he thinks, that there are specific reflex inhibitory mechanisms in the spinal cord; a direct influence of the sensory excitation upon the reflex centra appears much more probable. Possibly centrifugal motor impulses proceeding from the brain course through the medulla in the same way, but it seems doubtful whether the reflex inhibitions proceeding from the cerebrum admit of identification with the psycho-motor impulses.

The reflex inhibitions which Dr. LANGENDORFF has chiefly investigated are those which are of cerebral or psychical origin. He has shown that reflex excitability is exalted not only by division of the mid-brain (as SETSCHENOW states), but also of the hemispheres. He therefore concludes that reflex inhibitory mechanisms exist in the cerebral hemispheres of the frog. He has further shown that complete division of the cerebrum, or at least of the mid-brain, from the medulla is required in order to exalt the reflex activity of the whole body, but that lateral division of these organs is sufficient to cause increase of reflex activity on one side of the body. On the other hand, chemical excitation of one half of the transverse section of one optic thalamus occasioned in his researches lateral reflex depression of the opposite side. It follows from all this that the reflex-inhibitory influence of each half of the brain extends over one side of the body; the right half of the brain influences the left side of the body, and the left half of the brain exerts an inhibitory influence over the reflex actions of the right side of the body. Hemilateral section of the medulla oblongata just below the cerebellum consequently exalts the reflex

actions of the opposite side. On the other hand, a section made through one half of the medulla oblongata behind the fourth ventricle causes an exaltation of the reflex actions of the leg of the same side. Hence it follows that the conductors of reflex inhibitory impulses decussate in the medulla oblongata, which is in full accordance with the observations of STIEDA, that in the frog commissural or decussating fasciculi are observable in the middle line of the medulla oblongata.

Annotations.

"Ne quid nimis."

ABERDEEN UNIVERSITY COURT.

THE circumstance that among the six members constituting the governing body of the University of Aberdeen, not one should belong to the medical profession, while divinity, law, and arts are each ably represented, has for some time attracted the notice of the medical graduates of the University, and the opportunity of rectifying this omission now offered in the vacancy created by the appointment of the Rev. Dr. Christie to the chair of Church History, is, we understand, likely to be embraced. The fact that the medical members form the most numerous section of the General Council renders it reasonable that medicine should have its turn with divinity in the representation in the governing body. The Aberdeen University Court is, indeed, we believe, the only University Court in Scotland in which there is not a medical member. The name of Dr. Macrobin, Emeritus Professor of the Practice of Medicine in the University, is mentioned as likely to be put forward, and that gentleman's long experience in the affairs of the University as Professor and as Dean of the Medical Faculty, and as member of the General Medical Council, point him out as exceptionally well fitted to attend to the medical affairs of the University. The election falls to take place at the half-yearly meeting of the General Council on Oct. 10th. No other name except that of Dr. Macrobin has been mentioned, and it is expected that the other members will on this occasion see the reasonableness of allowing their medical brethren to have their turn in the representation. But in the event of more than one name being proposed, the election will be conducted by voting papers sent out by the University to all the members of the General Council.

CORONERS AND INQUESTS.

A FACT recorded in the last Weekly Return of the Registrar-General forcibly suggests the necessity for some official instructions to coroners, regulating their present irresponsibility in the matter of deciding upon the necessity for holding inquests. During the week ending the 8th inst. the death of a woman aged sixty-three years was registered in Lewisham without any certificate either from a registered medical practitioner or a coroner, and the cause of death was entered in the register as "probably concussion of the brain." Registrars are instructed that every case in which any form of violence appears to have contributed to a death (as well as in every case attended by any suspicious circumstances) must be reported to the coroner for the district *previously* to registering the death, whether a medical certificate purporting to give the cause of death be produced or not. In the case now under notice it appears that no medical certificate was produced, although it is not stated whether the deceased had been attended by a registered practitioner previously to her decease. The registrar appears to have carried out his instructions, and to have reported the case to the coroner, who decided that an inquest was unnecessary; "the result being," in the words of the Registrar-General, "that the cause of death was entered in the register as 'probably concussion of the brain,' without any satisfactory corroborative evidence of this statement of the informant." The Registrar-General has a manifest interest in obtaining for the death-register "satisfactory evidence" of the cause of every death registered, and other and still more important grounds exist on which to base the urgent desirability that an inquest, or some other form of judicial inquiry, should be held in such cases of apparently violent death as the one to which the Registrar-General has called attention. It is somewhat singular that, while the Registrar-General is continually alluding in his reports to the incomplete and unsatisfactory way in which so many coroners discharge their duties, and often ignore them, Mr. Edward Herford, the coroner for Manchester, never loses an opportunity of urging a grievance, based upon his opinion, that "the Registrar-General and Dr. Farr have constructed a system for practically superseding the coroner's duty." The Registrar-General complains that coroners do not co-operate with him by holding inquests in cases (even of violent death) reported to them because no satisfactory evidence of the cause of death is produced. Mr. Herford, at the same time, is complaining that he does not get the co-operation of the Registrar-General necessary to enable him to hold a sufficient number of inquests. There is evidently a misunderstanding here, and it appears that Mr. Herford, conscientious coroner as he undoubtedly is, either misunderstands the practice of the Registrar-General, or the law which governs the registration of deaths. At the same time, while inquests are held in Manchester in 8 per cent. of the deaths registered, and the proportion continues less than 3 per cent. in Sheffield and in other large towns, the Registrar-General's constant plea, that too few inquests are held in many places, is only strengthened by the assertion of Mr. Herford, that he is prevented (by the action of the Registrar-General) from holding a sufficient number in Manchester.

INSANE OR LUNATIC?

THE discrimination between insanity and eccentricity is too frequently forced upon judicial authorities in no way specially qualified to determine the issue. For example, a person is arrested in the act of performing some extraordinary, but not necessarily mad freak, and is taken before a magistrate, who generally recommends the case for the consideration of the prison officials. The principal warder is, as we know, held to be about as good a judge of mental disease as the surgeon. Considering the few and meagre opportunities possessed by the medical officer for ascertaining the actual condition of a prisoner in any ordinary gaol or "lock-up," it is easy to perceive that the warder may be the most acceptable witness. In any case, he is generally so regarded, and upon his evidence the question is commonly decided. This is a most unsatisfactory state of matters. The rough-and-ready method of diagnosis adopted by the prison official is, perhaps, applicable to the issue between malingering and overt madness; but it is wholly inadequate, besides being unsuited, to the discovery of those subtle differences which mark the characteristics of mind-derangement as contrasted with the mere exaggeration of what may perhaps be described as hypertrophied ideas. Of course, notions which become overwhelming in their influence on the judgment and will, however rational in their original constitution, become essentially morbid, just as by monstrous development a

physical organ may acquire the relative and functional qualities of disease. It is, however, essential for the public safety, and important to the welfare of those unfortunate persons who are, from time to time, submitted to magisterial inquisition, at the outset of an attack of mania, or in the course of some organic disease with mind-symptoms, that they should be at once placed under the observation of experts in mental disease, so that not an hour may be lost in the discovery and treatment of their maladies. Clearly, these cases ought to be remanded to an asylum where they would be under special professional care. Some alteration in the law may be necessary, to enable this method of disposal to be adopted. If that be the fact, steps should be taken to produce the required change; or it may be possible to evade the strict letter of the law, as it is now evaded whenever a case is recommended to a workhouse by some informal or unexplained construction of the Acts applying to vagrants. The subject is one of great interest and moment.

PHTHISIS IN DEVONSHIRE.

THE study of the influence of geographical conditions on the death-rate from consumption is beset with great difficulties. The occurrence of phthisis is determined by so many circumstances, and the relative strength of these determining causes varies so widely in different instances, that an absolute assessment of any one is almost impossible. But the careful study of the death-rate from phthisis in limited areas, in which some of the active agencies can be approximatively estimated, is very instructive, for by exclusion the relative influence of other agents, less accessible to direct observation, may be inferred. Dr. W. H. Pearse has endeavoured, by a careful comparison of the death-rates in the several geological districts of Devonshire, and by noting the effect of extraneous and accidental conditions, to arrive at some conclusion as to the influence of geological formation on the mortality from this most terrible disease of our island—a disease which kills more than one in every ten persons born. He has lately communicated his investigations to the Plymouth Institution.

The county of Devonshire is peculiarly suited for such a study, because there are in it very varied geological formations and varied physical conditions. The comparison has been made from the Registrar-General's returns for ten years, and the districts have been subdivided into similar geological or geographical areas. The first region examined is that of the Tavistock district, comprehending the elevated district of Dartmoor, and in this the granite region of Dartmoor and the Devonian region west of Exmoor have both a remarkably low death-rate, that of the granite region being only ·78, while the death-rate in England generally is 2·47. The district is one of active atmospheric changes and a high rainfall. In the Newton-Abbot district, in which the Dartmoor region slopes down to the sea, the death-rate is much higher. The granite region has still the least death-rate of the district, but its death-rate is higher than that of western Dartmoor. The order of the geological formations, according to the death-rate from consumption, is granite, Devonian, carboniferous, sandstone. But in this district many local influences are evidently at work, and it is remarkable that places in the Dartmoor vales, such as Ashburton and Chudleigh, have as high a death-rate as the consumptive resort of Torquay. To some of these local influences we will return directly. The St. Thomas's district around the mouth of the Exe has a very high death-rate, which may, Dr. Pearse thinks, perhaps be in part attributed to the fact that this portion has been for long a resort for consumptives. The Barnstaple district is remarkably free from phthisis; excluding Ilfracombe, it has the least death-rate as yet known in Devon. Lynton, with a mean population of 1106, had one male only die of consumption in ten years. Coombmartin, mean population 1451, had one male only die in ten years, and during the same period no female died of the disease in either parish; while nine other parishes, with an aggregate population of over 2000, had no death from consumption during the ten years. In the whole of this district the death-rate is lower on the Devonian than on the carboniferous formation.

Many of the facts contained in Dr. Pearse's paper illustrate the correctness of the law discovered by Drs. Bowditch and Buchanan, that wetness of soil predisposes to consumption; but they illustrate also the important fact that consumption bears little relation to the amount of rainfall, many of the healthiest districts, as western Dartmoor, being also those of the largest rainfall. The exceptions to the prevailing character of a district show how largely, as we have remarked, the death-rate is influenced by other than geological conditions. Local conditions of the population, proclivity to phthisis inherited, and, perhaps, intensified by intermarriage, has clearly raised the death-rate in some localities; in others, in-door occupation has probably largely assisted in developing the disease; and in many parishes it is noticeable that the death-rate of women is in especial excess. The Axminster district has a death-rate from women nearly double that of men, and it seems probable that it is due to the close, warm rooms in which the lace-makers are crowded for work. On the other hand, the low death-rate of the Dartmoor and North Devon regions is to be accounted for in part by the open-air occupation of the inhabitants. It is possibly in part due to the influence of elevation and exposure in determining, by inherited influences, such as are recognised in natural selection, a more healthy physical type. Dr. Pearse has added to his paper some speculations on the possible effect of slight geological influences into which we need not follow him. They rather lessen than enhance the value of his paper as a careful record of facts. As such, however, it is important not only for what it suggests, but as an illustration of the utility of a careful study of the endemic conditions of disease.

THE NEW ARMY WARRANT.

THE Warrant recently issued places the medical service of the army in many important respects in a more hopeful position than it has hitherto occupied. It will, in large measure, rest with the medical officers to assert for their order the position of a corps in all respects analogous to other scientific branches—the Royal Engineers and Royal Artillery for example. Military hygiene and medical organisation in the field will in future occupy a prominent, instead of a subordinate, position. In the exercise of their new functions and disciplinary powers it will obviously be necessary as well as expedient that the medical officers of the army should exhibit some tact. Anything like an excess of the purely military spirit will require to be repressed. It is as members of a scientific profession performing a special service in aid of the army, medical officers must assert their claim to confidence and command respect. The position is medical not military, and it would be unwise to aim at authority or to claim rights accruing exclusively to the character of a combatant. Without doubt the medical corps must be so constituted as to order its own affairs. Medical officers must have control over their subordinates and be empowered to carry out such arrangements, for the welfare of the troops, as science may prescribe. In this function they should be free from interference and are entitled to respect; but it will conduce to a good under-

standing and help to make the task easy if medical officers do not press beyond the lines of their commission as laid down in the warrant. We have prepared our readers for the reform now inaugurated, and sketched its main provisions; the object in view, and the method of its attainment. It only remains to express a hope that the measure may be so administered as to secure for the army medical service the opportunity of self-development it has so long desired. The event time alone can show.

THE PLAGUE.

DR. THOLOZAN, the European physician to the Shah of Persia, has communicated to the French Academy of Sciences a paper on plague, from which it would appear that the disease is more widely disseminated in the northern provinces of Persia than had previously been suspected. In our issue of the 1st inst. we described the appearance of plague in the province of Ghilan, and particularly in the chief town of that province, Resht, early in the year. We now learn that the disease also manifested itself in the province of Astrabad in December, 1876. On the first third of the route from Teheran to Meshed, Dr. Tholozan states, is the town of Sharoud. This town is situated twenty-five leagues from the south-east angle of the Caspian Sea, at an elevation of about 1000 metres. It is situated in an extensive valley, without marshes, and of which the climate is cold in winter and temperate in spring. Four leagues to the south of Sharoud, in the plain, are the small villages of Djaferabad and Dezadje, a kilometre distant from each other. There a disease, unknown to the inhabitants, but which is assumed to have been plague, appeared in the month of December, 1876. It was characterised by inflammatory swellings in the groins, the armpits, and behind the ears, accompanied by intense fever, headache, and delirium. Death supervened from the second to the fourth day. The tumours manifested themselves chiefly in strong sanguine women. Of two hundred persons inhabiting these villages, fourteen were attacked with this bubonic fever, and eight died. The disease continued about a month, and disappeared at the end of January. With respect to the outbreak of plague in Ghilan, Dr. Tholozan states that it appeared first in a narrow and filthy street in Resht, and, spreading throughout the city, extended to two districts three or four leagues distant from it. At the beginning of June the number of cases in Resht amounted to 170, nearly all fatal. All the investigations made have failed, Dr. Tholozan states, to show any connexion between the outbreaks of plague in Resht and the district of Sharoud and previous prevalence of plague in Mesopotamia, and he believes—somewhat prematurely, we think—that the Persian outbreaks are of local origin (endemo-epidemics, as he phrases it).

ACONITINE.

AN interesting paper was read before the Chemical Section of the British Association by Dr. C. A. Wright on the Alkaloids of Aconite. The substances obtained in 1860 by Groves and in 1871 by Duquesnel consisted mainly of impure aconitine. This alkaloid is usually to be obtained in fair quantity from the root of Aconitum napellus; but occasionally this root yields only a small quantity of aconitine, and a very large amount of a nearly inert bitter base—*picraconitine*,—forming well-crystallised salts. The alkaloid has not commonly been distinguished from aconitine, and whenever it was present in the root it was also present in the alkaloid obtained from it. Hence it probably exists in large quantities in many of the commercial specimens of aconitine and nitrate of aconitine. This, no doubt, accounts for the variable physiological properties possessed by different specimens of this substance. But another source of impurity and variability is the presence of a third alkaloid in the root of the Aconitum napellus—an alkaloid of lower molecular weight, and incapable of crystallising or of yielding crystallisable salts. Uncrystallised commercial aconitine appears often to contain this substance in large quantity. It is remarkable that the active crystallisable alkaloid of Aconitum napellus appears to be quite different from the crystallisable alkaloid of Aconitum ferox (pseudo-aconitine), although the two are evidently allied. The use of strong mineral acids and other reagents in extracting the alkaloids is likely to cause loss of crystallisable aconitine by alteration and decomposition, and hence probably the frequent statements that the alkaloid of Aconitum napellus is non-crystallisable. The tartaric acid process of Duquesnel is preferable; but Dr. Wright recommends that, as the first rough crystals of the base thus produced are impure, and as it is difficult to separate the crystallised salts of aconitine and picraconitine, it is desirable to recrystallise the salts obtained by Duquesnel's method from ether, to convert the base crystals into a salt, regenerate the alkaloid by sodic carbonate, and finally crystallise again from ether. In this way a definite homogeneous substance, possessing the physiological properties of aconite root in a very high degree, could be obtained.

Aconitine is, as is well known, an excessively energetic substance, so that working with it is a matter of considerable pain and difficulty. Extreme care is necessary in avoiding inhalation of the dust of the crystals of the base or of its salts. A minute fragment, too small to be seen, if accidentally blown into the eye, sets up the most powerful irritation and lachrymation, lasting for hours; whilst similar particles, if inhaled, produce strong bronchial irritation or considerable catarrh, according to the part where they lodge.

INTUSSUSCEPTION TREATED BY A CHEMIST.

THE *Devonport Independent* contains a report, extending over three columns, of an inquest on the body of an infant six months old. It was taken ill on a Saturday with diarrhœa. On the Monday the mother went to Mr. Codd, chemist, who prescribed castor oil. He then gave a mixture, the compositon of which may interest our readers. It consisted, according to his own candid statement, of 40 minims of tincture of catechu, 10 minims of tincture of kino, 10 minims of essence of ginger, 10 minims of chloric ether, 6 minims of aromatic spirits of ammonia, 5 minims (according to another witness 10 minims) of tincture of opium, half an ounce of syrup, and chalk mixture to an ounce and a half; a teaspoonful every four hours. Sickness being urgent, on the Saturday the mother again repaired to Mr. Codd, who prescribed a powder, to be given at twice, containing one-tenth of a grain of opium. The child vomited after the half of the powder as it had generally done after each dose of the mixture. It became prostrate, looked as if it was going to have a fit, and its mother became frightened into sending for Dr. Row, who attended it till death. He found the child's surface pale and cold, the eyes sunken and glazed, and the pupils contracted. On making a post-mortem examination on the order of the coroner, he found intussusception.

Dr. Row, at the inquest, made some very strong observations on the practice of giving opiates to children. Though we should scarcely go so far as Dr. Row, there can be but one opinion about the responsibility of giving them, or about the responsibility of a jury that entirely acquits a chemist who prescribes them for an infant, as the jury did here. The jury found that the child had died from natural

causes, and expressed the opinion that the chemist was relieved from the slightest blame. We will not begrudge Mr. Codd the comfort of this finding. But we protest in the name of humanity against a child, sick and pained for a week, being left to the medical care of a chemist, who, by the way, never saw it. We will pass no opinion either on the castor oil treatment, or that by a mixture with a dozen ingredients in it. We look for a time when chemists will themselves condemn one of their number who so trifles with disease. But meanwhile it is high time for the Legislature to assert that even infants have a claim to be properly attended in sickness.

THE SEASIDE AS A RESORT FOR INVALIDS.

THE custom of sending invalids to the seaside, at least early in their convalescence, would fall into disfavour if physicians more clearly recognised the perils and inconveniences to which they are exposed. Apart from the dangers of bad drainage and impure water, there are the worry and disturbance caused by the invasion of crowds of boisterous excursionists, the hourly infliction of execrable noises perpetrated by bands of so-called musicians, the wretched food, and the bad cooking. Added to all which there is the ever-changeful climate, which scarcely maintains a temperature or hygrometric condition two hours in succession on the coast, where it is affected by the alternation of sea and shore influences. It is pitiable to see the reputed health-resorts just now crowded with "cripples," of all classes and descriptions, obviously deriving the smallest benefit, with the largest amount of risk, from the most unpromising conditions. They sit or recline in wheel-chairs on piers and exposed situations, or are dragged wearily up and down esplanades, to their own injury and the sympathetic depression of those around. Surely it would be possible to devise a better mode of securing the advantages of "change" and "air" for the weak and permanently disabled, than one which exposes them to the gravest of atmospheric vicissitudes, and affords the least pleasure to joyless lives, while it inflicts many and mischief-working annoyances. Speaking generally, invalids fare better in the country districts than upon the coast, and the superior claims of "sea air" are not overwhelming when the drawback of incessant change of temperature, variable degrees of moisture, and unstable wind-force are taken into the account. In so far as fashion may determine the form of "change" recommended or adopted, we venture to think the prescription needs to be revised.

PURULENT PLEURISY.

AT the meeting of the Paris Medical Society of the Hospitals on July 27th two communications dealing with the subject of purulent effusions were read. The first was by M. Potain, who introduced a patient whom he had cured by means of the double syphon. This method consists in introducing into the sixth intercostal space two tubes separated from one another by a short interval, so that if a free opening become necessary, it may be made by joining the two apertures by an incision. One tube is then connected with a vessel placed above the level of the patient, containing the fluid with which the pleural cavity is to be washed. The cavity is made, as it were, to wash itself out,—the second tube being connected with a receptacle below the bed. It is obvious that the force and quantity of the fluid injected can be varied at will according to the relative positions of the two vessels. In the case described, M. Potain used a solution of salicylic acid. The patient was a lad fifteen years of age, who was admitted under M. Potain's care three days after the onset of an attack of pleurisy. Paracentesis was performed with the aspirator on Dec. 17th, and nearly two pints of pus evacuated. A second tapping took place on Jan. 16th, and this time the pus was slightly fetid. On the 27th, the signs of effusion being again marked, M. Potain employed the syphon apparatus above described. The temperature rose to 102·5° Fahr., but soon fell to normal. Recovery was retarded by the improvement of the lad's general health being such that he amused himself (according to the report) with removing the tubes. This was followed by a rise of temperature, but eventually recovery ensued from the empyema discharging itself through the lung.

The second communication was by M. Dieulafoy, and dealt with the subject of the transformation of sero-fibrinous into purulent effusions—a mischance so frequently, and, M. Dieulafoy thinks, erroneously, attributed to the operation of paracentesis. After examining microscopically the fluid of pleuritic effusion in twenty-two cases, he has come to the conclusion that the question whether an effusion, simple at first, will become subsequently purulent depends upon the proportion of red blood-corpuscles present in it. Every such effusion, however "simple" the form of pleurisy, contains from 1500 to 2000 red corpuscles to a cubic millimeter of fluid, which may not have the slightest tinge of colour. If the fluid contain from 6000 to 7000 corpuscles, it has a slightly red tinge and is extremely prone to become purulent. In fact, if the figure exceed 2500 to 3000 red corpuscles in the cubic millimetre, it will probably become purulent. But, at the same time, there are pleurisies hæmorrhagic throughout which never become converted into empyema. The presence of the blood-elements in every pleuritic effusion points, he thinks, to a stage of engorgement in pleuritis as in pneumonia—a stage of variable duration and date of appearance. It is, of course, unfair to judge of the value of any observations from the brief outline afforded of them in a journal report; but it must be confessed that until further data are given, the statements propounded by M. Dieulafoy should be received with caution.

DANGERS OF POLO.

WITHIN the short period of a year we have had to record two fatal accidents at polo matches. The first occurred in India, and resulted in the death of a highly-esteemed officer; the other, of more recent date, took place at Shorncliffe, the victim being Captain Cunard, of the Grenadier Guards. In addition to these deaths we have received intimation of numerous accidents, more or less severe, arising during these matches, showing, what indeed must already have been self-evident, the risk that attends this game. We know that any objections we may raise as to the dangerous nature of the game, will be met with the plea that no manly English sport is free from danger, and that the accidents in the hunting-field are certainly more numerous than those at polo matches. That fatal accidents occur from boating, from cricket, and at football we do not deny, but those occurring from the first two are generally the result of gross carelessness and incompetency, and from the latter the dangers are reduced to a minimum when the Rugby game is discarded. With respect to the accidents on the hunting-field we are prepared to state that, taking into consideration the number of persons who annually follow the hounds, the accidents are really very few and proportionately far below those that occur from polo among the limited number of players during the year. One other point we would dwell upon: dangerous as the nature of the game is, the peril is greatly increased by the fact of its being played by grown men. A fall after which a schoolboy would shake himself and be none the worse, might in

the case of an adult rupture some important viscus or artery. In the two fatal cases we have noticed, death seems to have resulted from internal injuries of this nature.

A QUARANTINE MYSTERY: THE FRENCH TRANSPORT "CORREZE."

IN our issue of Sept. 1st we reported the news, conveyed by telegram, of a French transport, the *Correze*, from Saigon, bound for Suez, having passed Aden with cholera on board. The ship arrived at Suez on the 24th ult., having on board 770 soldiers. It appears that she sailed from Saigon on the 19th July, cholera being then present in that port. The day after sailing, the 20th July, cholera appeared among the troops, and continued to prevail in the ship until the 16th August. Altogether 60 cases of the disease occurred within this period, of which 32 cases were fatal. After the 16th August no other cases of the disease occurred, and when the ship dropped anchor off Suez she was free from the malady. But here comes the mystery. Cholera was not the only fatal disease on board; 18 deaths from other causes than cholera also occurred during the voyage to Suez, and when the ship arrived there, although free from cholera, she had not less than 130 sick on board. The vessel was sent, by direction of the Egyptian Board of Health, to Tor, on the east coast of the Gulf of Suez, to perform quarantine, and there over a hundred sick were landed and placed under canvas. But, strange to say, not a hint is afforded as to the nature of the disease or diseases giving rise to this formidable amount of sickness, nor as to the cause or causes of the 18 deaths, other than from cholera, at sea. It is reported that the French quarantine authorities propose to scuttle the *Correze* when she reaches her final destination, Toulon, a proposition which, if true, adds to the mystery of the event.

GASTRITIS FROM ETHER-DRINKING.

AN instructive case is recorded by M. Gaillard, in his lecture on Alcoholic Gastritis, contained in the volume of Clinical Lectures which he has just published. A woman, forty-eight years of age, a portress by vocation, whose health had always previously been good, was attacked, about three weeks before her admission into La Pitié under the author's care, with slight tremor of the hands. A week later she suffered from substernal and interscapular pain, and then morning vomiting. In addition to the tremor of the hands, she began also to experience tremors, cramps, and formication in the lower limbs, with weakness in walking. The vomiting continued, as well as the pain in the chest, the pain not being limited to the lower end of the sternum, but experienced along the whole course of the œsophagus. The tongue, which was large and white, was tremulous; there was intense thirst and some anorexia. M. Gaillard concluded that the patient was suffering from alcoholism, but the imputation was denied by the patient so strenuously, and with such an air of sincerity, that it seemed as if the diagnosis, which, however, appeared to be fully borne out by the results of ten days' treatment, could not be sustained. It was then, however, found that the patient's denial was perfectly true, but that she had during the past two months taken habitually before her meals a piece of sugar dipped in sulphuric ether, on account of indigestion. She had thus consumed ten bottles of ether, each containing eighteen grammes (more than half an ounce). The immediate effect was one of excitement, which was followed by giddiness, a sense of weight, and tendency to sleep, but these effects speedily passed off. The case affords a good illustration of the resemblance between the physiological effects of ether and alcohol.

THE MERCHANT SERVICE.

THE usual annual return of causes of death among merchant seamen has just appeared. A total of 4151 deaths are recorded as having occurred at sea during the past year, 12 of which are credited to scurvy, 30 to "natural causes," and 234 to "unknown causes." It must be remembered that this classification is compiled chiefly from the various reports of causes of death made by the masters of the vessels to which the men belonged. But in these days of popular scientific instruction, is it not possible to increase the value of these returns by reducing the number of those who die from "natural" and "unknown causes"? Perhaps the author of "The Ship Captain's Medical Guide" (a copy of which is carried in every foreign-going ship) might be officially instructed to educate his readers somewhat more successfully. We observe that the "scurvy" returns indicate a great increase as compared with previous years. We take this to be due, not so much to the actual increase of the disease, as to the fact that ship-masters recognise its symptoms more readily now than formerly.

THE MEDICAL DEFENCE ASSOCIATION.

IN a circular accompanying the Annual Report of the Medical Defence Association, the honorary secretaries, Mr. George Brown and Mr. W. Douglas Hemming, say modestly that they trust it will be considered that the work which has been accomplished justifies the council in asking for the continued support of the medical profession. We quite agree with the secretaries. The corporations use none of their authority over those of their own members who act irregularly; and the General Medical Council goes on hoarding its money without vindicating the law in virtue of which it exists. Under these circumstances the very existence of Medical Acts is apt to be forgotten, and would soon be so were it not for the wise and successful action of the Medical Defence Association. There are indications that chemists will claim recognition as *quasi* medical men if a determined assertion is not made of the nature of medical education, and of the necessity for it in all who undertake medical functions. We must rely on the Defence Association for making this assertion, and there never was a time when it deserved so much as now the support of the profession.

COUNTER PRACTICE.

WE have observed with some surprise that the *Pharmaceutical Journal* has thought fit to defend, in an emphatic manner, the action of the Pharmaceutical Society in giving authority to their solicitor to defend, "at his discretion," a chemist threatened with prosecution for counter practice. We must assume that the *Journal* is bound to defend the action of a majority of the Society. But the discussion of the subject, as far as we are concerned, need proceed no further, because the *Journal*, acting, we suppose, as the organ of the Society, asserts that "the majority of the members of the Council and the majority of the trade are decidedly of opinion that counter practice is *legitimate*." (The italics are ours.) After this important but somewhat infelicitous declaration, we have nothing more to say.

A HOSPITAL SUNDAY FOR CORNWALL.

A MEETING was held at the Royal Cornwall Infirmary, Truro, on Friday, the 7th inst., to determine upon the selection of a day to be annually observed for making collections in places of worship on behalf of the funds of the infirmary. The Bishop of Truro presided, and expressed most earnest wishes for the success of the movement, at the

same time counselling that as much freedom of individual action should be acquiesced in as was consistent with the object to be attained. It seemed to be pretty generally understood that not much co-operation could be expected from the eastern part of the county, which is largely served by the hospitals at Plymouth and Devonport; while in the adjacent district of Redruth a day had been fixed for making a special appeal on behalf of the Miners' Hospital. Ultimately it was decided to recommend that the last Sunday in September should be set apart for the infirmary collections, which this year will also be the day appointed for the Redruth Hospital collections. If there were *one* national Hospital Sunday throughout all the counties of England, the perpetually recurring difficulty of collections for special objects clashing with any general appeal of the sort would cease to operate, and the idea which induced THE LANCET to pioneer the Hospital Sunday movement would then be realised.

PRACTICAL ANATOMY.

IN view of the probable difficulty in obtaining a sufficient supply of subjects for anatomical study during the ensuing session, would it not be worth while to inquire whether subjects might not be obtained from the asylums? We believe the number of "unclaimed bodies" buried by the committees of county and borough asylums at the cost of the ratepayers is very large, and it seems probable that these would be available for the use of the schools if a satisfactory arrangement could be made with regard to their removal. It is necessary that any scheme adopted should be general, and we venture to suggest that it would be fully worth the while of lecturers and demonstrators, duly licensed, to address an application direct to the clerks of visiting committees of county and borough asylums with a view to organise some system of transfer. So much depends on the supply of "subjects" to the medical schools that the utilisation of any possible material becomes a public duty which ought not to be neglected.

THE LAUNDRY QUESTION.

COMMUNICATIONS are still reaching us with regard to efficient laundry establishments in operation or about to be constructed. We hope to hear of a more spirited movement in the metropolis. It is manifest that the provision of well-appointed houses, with all necessary appliances, and the means of utilising a considerable amount of hand-labour, for which service must be found, will require the investment of substantial funds. Every venture of the class, although public health be the ultimate object, must be carried out upon a sound commercial basis. It will be satisfactory to learn that by co-operation or under the Limited Liability Companies Act extensive laundry establishments have been provided. The sooner some steps are taken in the matter for the middle-class business of London, the earlier may we look for the legitimate fruit the recent exposure should produce. The subject is too important to be allowed to sleep.

AFFILIATION OF PROVIDENT DISPENSARIES.

THE Secretary of the Hospital Saturday Fund requests us to give publicity to a recommendation of the Distribution Committee of the Fund in favour of the affiliation of the provident dispensaries in London, and of the formation of a central board, to consist of representatives from each provident dispensary, to frame rules and maintain a general supervision. It is to be hoped that London will not much longer be behind Manchester and Liverpool in the attempt to extend and organise the Provident Dispensary system.

AT a recent meeting of the Portsmouth Town Council, the town clerk read a letter he had received from Dr. J, Ward Cousins, hon. secretary of the local branch of the British Medical Association, intimating that the Council of the Association would accept an invitation from the Mayor and Corporation to visit Portsmouth in August, 1878. The cost to the town would be about £400. Some economists in the corporation did not clearly see their way to a *quid pro quo* in sanctioning such an arrangement. All were agreed that nothing could be taken out of the public funds. It was resolved to appoint a committee to consider the matter and report.

THE deaths in London last week numbered 1180, showing an annual death-rate of 17·4, as compared with 22·9 in the corresponding week last year. The fatal cases of small-pox were reduced to 8; 23 deaths resulted from measles, 17 from scarlet fever, 7 from diphtheria, 19 from whooping-cough, 21 from different forms of fever, and 87 from diarrhœa: these seven zymotic forms of disease thus accounting for 182 cases of the total mortality. These comparatively low figures would seem to indicate a satisfactory state of the public health in the metropolis at this usually rather unhealthy season of the year.

THE thirty-first Report of the Commissioners in Lunacy, dated March 31st, 1877, is just issued. The Commissioners say: "The returns made to our office show the total number of lunatics, idiots, and persons of unsound mind, registered in England and Wales on the 1st of January last, to have been 66,636—an increase of 1720 upon that of the 1st of January, 1876. These numbers do not include 252 lunatics so found by inquisition, who reside in charge of their committees." The average annual increase of the last ten years (1867–1876 inclusive) has been 1755.

A CASE at the Manchester Police-court, in which an undertaker has been committed for trial on a charge of forging death certificates, seems to indicate the great need of caution on the part of registrars in receiving such documents, especially when there is the least ground for suspicion of their genuineness. The evidence went to show that the accused had obtained a number of forms of certificates of death, which it was alleged he filled in, signed with the name of a medical practitioner, and presented to the registrar.

WE understand that the operation of excision of the larynx has been successfully performed by Dr. David Foulis, in the Training Home for Nurses, St. George's-road, Glasgow. The whole of the larynx, except the superior cornua of the thyroid cartilage, was removed, The patient's condition is satisfactory. The operation was rendered necessary by the presence of a recurrent papillomatous growth on the under surface of the vocal cords.

DR. COLLIER, medical officer of health for Fulham, states, in a recent report, that having been informed of the existence of a case of small-pox in a particular street, he visited the house in question, and found a woman convalescent, but still desquamating, surrounded by a circle of friends, who were offering chatty congratulations. The practical results of this little social gathering were thirteen more cases in the same street.

MDLLE. TITIENS, having in many respects improved since the last tapping at Worthing, arrived at her residence in the Finchley-road, by an afternoon special train, on Thursday, after a very satisfactory journey, accompanied by Mr. Harris, of Worthing. She was seen soon after her arrival by Mr. Howell, of St. John's-wood, and Mr. Spencer Wells.

ACCORDING to the *Metropolitan*, the mortality of the Thames may be, at this season of the year, calculated at the rate of thirty deaths per week, all from drowning. No deaths are recorded in the returns of the medical officer of health for the port as having occurred on board ship.

THE QUEEN has appointed George Husband Baird MacLeod, M.D., Regius Professor of Surgery, University of Glasgow, to be one of the Surgeons in Ordinary to her Majesty in Scotland, in the room of Professor Joseph Lister, resigned.

MR. RICHARD ARJOHN, M.A. Cantab., Prælector of Chemistry at Caius College, Cambridge, Public Analyst for the borough and county of Cambridge, the Isle of Ely, and the county of Huntingdon, died at the Midland Hotel on Wednesday.

THE autumn Congress of the Sanitary Institute of Great Britain will be held at Leamington on the 3rd of October, when Dr. B. W. Richardson will deliver an opening address.

LOCAL MORTALITY STATISTICS IN LONDON.

IT is becoming highly desirable that we should know more of the relative sanitary condition of the component parts of the huge urban aggregation called London than can be gathered from the health reports issued at irregular periods by the medical officers of health to the thirty-nine sanitary authorities, in whom the sanitary welfare of the metropolis is vested. The variety of forms in which these reports are presented to the public, and, with few exceptions, the looseness, not to say inaccuracy, of the statistics they contain, render them practically useless as a guide to the true death-rate of any particular district of London. This is the more to be regretted since the declaration of an "unhealthy area," within the meaning of the Artisans' Dwellings Act, is in great measure dependent upon the preparation of reliable mortality statistics. Nearly all the metropolitan local reports for 1876 which have come under our notice appear to show that the rates of mortality of the districts to which they relate are considerably below the average rate for the whole of London, as published by the Registrar-General; and if we were not prepared to dispute the accuracy in this respect of the local reports, the question would naturally arise as to where the high rates prevail which raise the average for the whole metropolis. The fact, however, is that what with deaths occurring in workhouses, in general hospitals, in county lunatic asylums, in metropolitan asylum hospitals, in sick asylums, in metropolitan asylums for imbeciles, and in other similar institutions, the greatest care, and an infinity of laborious additions and subtractions have to be carried out before anything like an approximation to the true death-rate of any given sanitary district of London can be calculated. Dr. Gibbon, in a report only just issued, asks us to believe that the death-rate in Holborn district during 1876 did not exceed 21·0 per 1000, and that it was 1·3 per 1000 below the average rate for the year in the whole of London. If it were true that the death-rate of such a district as Holborn, a large proportion of which has been condemned under the Artisans' Dwellings Act, is lower than the average rate in London, one of two facts would have to be accepted; either the death-rate does not afford a trustworthy indication of the health of a population, or such courts and alleys which lie off the Holborn end of Gray's-inn-road are not so unhealthy as common sense tells us they must be. It is, however, much more easy to believe that Dr. Gibbon's calculated death-rate is delusive. He follows a convenient but inaccurate and deceptive practice adopted by so many of the metropolitan health officers; he deducts what he calls "the deaths of non-residents in institutions," but he makes no correction for the large number of deaths of Holborn residents in outlying metropolitan institutions, such as have before been mentioned. This source of error vitiates the mortality statistics in nearly all the metropolitan health officers' reports, and causes the various sanitary authorities to congratulate themselves that the death-rates for their districts are below the general average for London. We can now only allude to one other case where this error gives strikingly fallacious results. Dr. Bateson some time since reported to his authority that during the year ending March, 1877, the death-rate in the parish of St. George-the-Martyr, Southwark, did not exceed 21·5 per 1000, and that it was considerably less than the average rate for the whole of London. Now, the parishes of Holborn and of St. George-the-Martyr contain perhaps larger proportions of unwholesome and disreputable tenement houses than any other district of London. Let us examine Dr. Bateson's rate of mortality. It is simply the proportion of deaths registered within the parish to its population. This, for reasons we have explained, gives no clue to the true death-rate. Nearly all the deaths of in-door paupers belonging to the parish of St. George-the-Martyr are registered in the Union Workhouse in Newington; and, after debiting the parish with its fair share of the deaths in the workhouse, and also of those recorded in hospitals, in county lunatic asylums, and in the metropolitan asylums for imbeciles, it becomes evident that the true death-rate of St. George-the-Martyr is much nearer 26 than 21·5 per 1000, as reported by Dr. Bateson. It is scarcely to be expected that medical practitioners who hold office as medical officers of health, at a small salary, should devote sufficient time to the duties of the post to master the intricacies of vital statistics. There can, however, be no doubt about the mischievous tendency of official statements being made to the effect that the rate of mortality in Holborn and in the worst parts of Southwark is considerably below the average rate in the whole of London, which includes such comparatively healthy suburbs as Hampstead and Stamford-hill on the north side, and Lewisham, Sydenham, and Dulwich on the south side. It may be hoped that the Public Health (Metropolis) Bill of the future will establish a greater cohesion and unanimity between the thirty-nine metropolitan sanitary authorities, provide for something like uniformity in their health reports, and lead to the appointment of health officers, not only specially skilled in sanitary science, but entirely devoted to public hygiene. Under such a *régime* the public might be better informed as to the relative mortality statistics of different parts of London, about which so little trustworthy information is now available.

THE MEDICAL ASPECTS OF THE WAR.

IT would almost appear, if current military criticisms on Russian generalship are to be received, that the one particular item in the events of the war to the present time which most deserves credit in the administration of the Russian forces is the medical organisation for the relief of the sick and wounded. This, supplemented by the remarkable efforts of the Russian Red-Cross Society, displays a foresight probably unique in the history of war, and has been conducted on a scale which, certain military critics notwithstanding, would presuppose a long and severe campaign. In June, the hospital accommodation provided for the Russian army campaigning on the Danube numbered over 30,000 beds, and for the Russian army campaigning in Armenia 13,000. The project of drafting off from the seat of war, to hospitals in the interior of the empire, the sick and wounded, notwithstanding that the number of sanitary trains specially organised for the purpose is as yet too limited, is apparently working admirably, and even St. Petersburg is not so far distant from the Danube as to exclude it from receiving its quota. Two hundred patients or thereabouts from the seat of war are now on their way to the capital city, or have already reached it. When the Russian military system is placed in direct communication with the Roumanian railways, and a line of railway is established between the rear of the Russian forces in Bulgaria and the

right bank of the Danube, as is about to be the case, the facilities for the removal of the sick and wounded from the seat of war will be largely increased.

We have not hesitated to write most favourably of the arrangements for drafting the sick and wounded from the seat of war, and distributing them in various towns and cities in the interior of the empire. It has seemed to us, above all things, the measure which would best meet the contingency of hospital overcrowding so apt to arise in the progress of war, and which, when it occurs, is commonly productive of the most disastrous results to the wounded. Although, of necessity, the more seriously wounded cases must be left in the hospitals in immediate rear of the army in the field, yet this ought to furnish no serious objection to the arrangement; for, from the diminution of the cases which would else be under the care of the medical staff, it ought to be possible more certainly to obviate the danger of surgical overcrowding, and, from the relief of the labours which would otherwise have fallen upon them, the medical staff should be capable of giving more minute attention to the seriously wounded. Nevertheless, it is reported from Odessa, that during a recent inspection of the military hospitals there by Professor Pirogow, this celebrated surgeon, in a letter to the local Red Cross Committee, has taken occasion to animadvert in a certain sense upon the present method of selecting cases for removal from the seat of war into the interior of the empire. He is reported to have written in this letter that it was very undesirable that the grievously wounded should be left at the seat of war, while the lightly wounded should be carried luxuriously away to hospitals in the interior. The practice should be otherwise, he avers; for, by the present practice, ignoring the experience of previous wars and the danger of propagating pyæmia, risk is run, he states, of sacrificing many lives unnecessarily, as successive batches of wounded are received into the hospitals infected by their predecessors. Surely there must be some omission or error in this report. It seems to assume the necessity of hospital-infection in military field hospitals, and of surgical overcrowding. We protest against such an assumption. It has been understood in this country that only such of the wounded were excluded from removal into the interior as it would be manifestly dangerous to remove; and we can only conceive of these more serious cases being placed under less favourable conditions for recovery by remaining behind, from their being dealt with, both as to hospital space and surroundings, as if their care involved no greater thought as to hygienic conditions than if they were slight cases. Now it is just because the drafting away of the slightly wounded and sick into the interior must relieve the pressure on hospital accommodation and on the medical staff, and must give facilities for avoiding surgical overcrowding and for more careful treatment of surgical cases, that we have approved of it; and we should anticipate that consequences, such as Professor Pirogow appears to dread, would only follow upon some curious neglect of well-known principles of hospital management, equally applicable to field hospitals as to others, or upon the sudden accumulation of a great mass of wounded, after a severe action, beyond the area where rapid drafting away is available.

Dr. Hübner, of statistical celebrity, gives an interesting account of the sick and wounded of the Russian army on the Danube and in Bulgaria received in Yassy from the 3rd June to the 15th August. During this period 10,556 sick and wounded arrived at the capital of Moldavia, and of these 9636 were sent on into Russia. Of the patients 5149 (48·77 per cent.) were suffering from wounds, a proportion he observes, suggestive, from the relatively small number of sick from disease, of the excellent sanitary condition of the army. Among the patients suffering from disease, the small proportion affected with epidemic diseases was noteworthy. Thus the number suffering from "fevers" was 1798 (17·03 per cent.), from typhoid 404 (3·82 per cent.), and from dysentery 344 (3·25 per cent.). The following table shows the arrivals of the sick and wounded at Yassy, and their departure week by week for Russia during the period under consideration:—

	Total Number of Sick and Wounded received at Yassy.	Wounded.	"Fever."	Typhoid.	Dysentery.	Total Sick and Wounded sent into Russia.
21—27 June	618	225	35	12	3	571
28 June—to 8 July... ...	455	14	34	52	12	463
5—11 July	760	103	106	89	50	681
11—18 July	1157	281	238	96	41	977
19—25 July	2084	975	461	61	67	1947
26 July—1 August... ...	3220	2236	472	50	81	2951
1—8 August	2262	1315	452	44	90	2046
	10556	5149	1798	404	344	9636

The Russian Red Cross Society has established at the Yassy Railway Station hospital huts containing 300 beds, where the sick and wounded arriving by the Roumanian railway receive necessary medical care, refreshment, and several hours' rest before proceeding on the further journey across the Moldavian border and into Russia. Nine sanitary trains, maintained at the cost of the Society, are engaged upon the Roumanian railway in the removal of the sick and wounded, but they are insufficient for the conveyance of the whole number. Of 9636 sick and wounded transported in the course of seven weeks only 4217 were carried by the Society's trains, the remainder travelling by trains composed of ordinary carriages and of luggage vans adapted for the moment to the use of the patients.

Russian journals aver that to the present moment the Russian forces in Bulgaria have suffered from no defect of food, and it would appear from the *Daily News* special correspondent that, whatever may be the imperfect organisation of the Russian commissariat, the soldiers have not yet suffered from it. It would appear also that the health of the forces generally is still good, the proportion of sickness being small.

Turning to the Turkish forces in Bulgaria, the later reports as to their medico-sanitary state are by no means so favourable. The sanitary management of the troops, at least in the Balkans, seems to be becoming rapidly wholly disorganised. The information most recently received on this subject chiefly comes from Adrianople. From this it would seem that deficiencies of the Turkish commissariat are beginning to tell seriously upon the feeding of the soldiers. It would appear also that the shoes of the troops of some detachments are giving out without a prospect of their being replaced. Moreover, as we surmised on hearing of Dr. Meyrick's death from dysentery, this formidable disease has broken out and is spreading among the soldiers. Scurvy is also showing itself. The state of Adrianople, to which city a very large number of the homeless population of the districts ravaged by the irregular troops have fled, and where very many of the sick and wounded of the army are accumulated, is even now, thus early in the autumn, painfully suggestive of the state of the place when it was occupied by the Russian army in 1828–29. Plague broke out among the invaders, and spread so rapidly and widely that the sick could not be all sheltered and the houseless lumbered the streets. A recent communication from one of *The Times* correspondents describes the sick and famishing Turks as now lying about the streets, despite the efforts of the various relief associations. If this be the case in the autumn, what must be looked for in the coming winter?

Last week we gave the names of the ten surgeons sent out to the aid of the Turkish forces by Lord Blantyre. We have now to add to that nobleman's list, Mr. Alexander O. Mackeller (of St. Thomas's Hospital), and Drs. Robert Pinkerton and Richard B. Macpherson (who left London for Constantinople on the 6th inst.), also Dr. Walter Stewart. This makes a total of no less than fourteen surgeons sent by Lord Blantyre to the seats of war in the East. The following is a list of the surgeons sent out by the Stafford-house Committee: Messrs. Attwood, Hume, Sandwith, Edmunds, Hayes, Stiven, Bond Moore, McIvor, John Weller, Macquean, John Naylor, Beresford, and Baker,

together with ten dressers. Messrs. Attwood, Hume, and Sandwith are at Andrianople, Mr. Edmunds in the Shumla district, Messrs. Hayes and Stiven at Rasgrad; the destination of the others with the Turkish forces is yet unknown. A telegram received on Sept. 10th states that Surgeon Weller, whilst in medical charge of twenty-four severely-wounded men, and proceeding from Keranlik to Philippopolis, was attacked by a horde of Turkish irregulars, and despoiled of every article of value in his possession.

Lord Blantyre has favoured us with the following extract from a letter written from Erzeroum by Dr. Charles Featherstonhaugh, dated August 15th, 1877:—

"The post leaves to-morrow, so as I have time to spare this evening I will try and give you an account of our doings for the last fortnight.

"I am glad to say our khan has all been whitewashed, and has got a regular cleaning. We have got in bedsteads and proper bedding, and a few things that are always necessary for cases that have been operated on. On Wednesday last (this day week), thirty-one cases were sent to be under my care from one of the other hospitals, nearly a mile away from ours. Some of them were wounded at Bayazid three months ago, and, I need scarcely add, they were in a wretched state, that they suffered very much from being carried on men's backs from one hospital to the other, although they have plenty of stretchers lying unpacked outside the entrance of the principal hospital. Three have since died, and I fear two or three more will soon follow.

"On Thursday last I amputated a poor fellow's thigh at about the junction of the lower and middle thirds. All up his knee was quite gangrenous. He is fairly well, though very weak. Dr. Casson amputated another man's leg below the knee that same day. A man whose leg I amputated on the 21st July died on the 7th of this month. He had been doing extremely well, when he got diarrhœa, which I could not stop. Yesterday I amputated a man's arm above his elbow. His other arm is broken, but he is a plucky fellow, in excellent spirits, and I have every hope of a good result.

"On Monday (6th) a Lieutenant Drummond, R.N., arrived from Constantinople with a stock of medical stores, sent by Mr. Barrington Kennett. They are not the sort of things most needed, but I suppose they are the best to be got in Turkey. Yesterday Messrs. Buckby and Guppy arrived, and I have no doubt will be useful. Mr. Buckby gave me a pocket-case sent by you; many thanks for it. I just began to feel the want of a few things I was running short of, and which are fortunately in it. Dr. Casson intends going to Mouktar's camp next week, and will, I think, bring one of the new arrivals with him, leaving me to see after 'British interests' here. There is nothing going on at the front at present, but about the beginning of September Captain Norman expects some fighting.

"We had a severe thunderstorm here to-day; the rain was a great blessing, as it removed heaps of filth of all description from the streets, and for once the air seems pure. There is a good deal of sickness among the poor of the town, caused, I have no doubt, by dirty and unripe fruit which they eat in quantities.

"I am happy to say I never felt better in my life.

"P.S.—Dr. Boyd took all the bandages and chloroform, but we have a good supply here."

Correspondence.

"Audi alteram partem."

ON THE CONNEXION BETWEEN MEASLES AND ROTHELN.

To the Editor of THE LANCET.

SIR,—Is it possible that Dr. Bristowe and I are looking at opposite sides of the shield? I should hardly venture to obtrude my own opinion in opposition to that of so eminent an authority did I not believe in a probable specific difference between rotheln and the so-called roseola, rubella, rosella, or rubeola notha, which formed the basis of my comparison. Of the former disease, as I understand it, I have no personal experience, but the latter was epidemic in Rugby in 1870; and a few years ago I read a short and hitherto unpublished paper before the Harveian Society, from which I quote the leading points:—

"With regard to the form of disease, and the precise sequence of symptoms, some variation was observed, but as a general rule its outbreak was unattended by feelings of illness or malaise, and it not uncommonly happened for a boy to discover the eruption quite accidentally on proceeding to wash in the morning. It consisted of small, irregularly-shaped florid spots, not perceptibly raised, and disappearing completely on pressure; appearing first on the chest, from thence extending to the face and limbs, and spreading so rapidly as to have quite faded by the third day. Conjunctival injection was by no means a constant symptom, but trifling redness of the throat could nearly always be detected on careful examination. The temperature usually ran up to 99·4° F., but the patients felt perfectly well, and were with great difficulty restrained within proper sick-room discipline. No desquamation was noted, nor any of that subsequent debility which usually follows very trifling febrile disorders in the young.

"The period of incubation was apparently eight days, and of the highly infectious character of the exanthem no doubt could be entertained, as it spread in the various rooms from bed to bed with most striking regularity, and was conveyed from house to house by boys meeting in their various forms.

"In fact, had its progress not been arrested by early and effective isolation, I make no doubt that every one of the 500 boys composing the school would eventually have been placed 'hors de combat;' a complete temporary collapse of the educational arrangements must have been the necessary result. Both Trousseau and Squire believe the infection of this to be much slighter than that of true measles, and certainly if we adopt the opinion of Professor Widerhofer, of Vienna, and other German authorities, and hold that the evidence of infection is the nasal mucus secreted during the prodromal and earlier eruptive stages, we must grant that the absence of this communicating element in my cases must have seriously weakened their propagative power. An ounce of fact, however, is worth cartloads of theory, and I am bound to say that the highly contagious power of the roseoloid rash was amply proved, not only in Rugby itself, through which the epidemic ran very completely, but in London and other parts of England.

"I have already hinted that differences of type were observed, and these were of some interest, as bridging over the distinction between this and fully developed measles. In some instances, severe headache, cough, and general febrile disturbance, lasting twenty-four hours, ushered in the attack, which was then attended with a higher temperature, conjunctival injection, and more tendency to coalescence of the eruptive points. But the gulf was fully spanned in two most crucial cases belonging to the earlier groups: one of these lads had passed through a severe attack of true measles several months before, and when it came to his turn to be affected by the spurious form, it assumed in every respect the symptoms of the major disease, as indicated by premonitory mucous irritation, an eruption beginning on the face, becoming markedly crescentic, and gradually deepening from the early rosy tint to the true dull measly hue; a temperature ranging to 102°, and bronchitis persisting for several days. A tedious convalescence ensued, and about the same time, and evidently derived from the same source of infection, another lad had an almost identical attack, only differing on the side of greater severity and of bronchial symptoms, which created some uneasiness, as being implanted on a naturally weak chest."

The occurrence of these two cases at a time when careful inquiry could discover no foci of true measles in Rugby, and in the persons of lads who had slept in adjoining beds to their companions who became affected with the spurious variety, went far to convince me that the epidemic here described must have been merely an aberrant or minor form of true rubeola, originally diverted from its more special type by some epidemic or atmospheric influence, and subsequently communicating itself as a rule in its like. That it differs from rötheln can hardly be doubted by those who read Dr. Murchison's clinical lecture on the latter malady in THE LANCET of Oct. 29th, 1870, where he describes an attack beginning with sharp feverish premonitory symptoms, followed by running at the eyes, and

an eruption of irregular reddish patches, resembling measles. The throat becomes sore, vivid injection and great enlargement of the tonsils is observed, the temperature runs up as high as 103·2°, and the eruption in two or three days becomes confluent, and much resembles scarlet fever. It is followed by heavy desquamation, and in short, as Dr. Murchison remarks, there is a combination of scarlatinous angina and tongue, with morbillous catarrh. That this is a specific disease I fully admit, but if roseola again is different, and is merely an aberrant form of measles, its occasional throwing back to the parent stock suggests some analogy with varicella, whose origin may possibly be also due to an accidental splitting away from its major form of disease.—I am, Sir, your obedient servant,

Brook-street. ROBERT FARQUHARSON, M.D.

"HOSPITAL MORTALITY."

To the Editor of THE LANCET.

SIR,—I must ask for space to protest against your statement that "serious charges had been made by Mr. Tait against the administration of St. Thomas's Hospital." I have done nothing of the kind. The very worst I have said about that hospital is at page 123, in the following paragraph: "As to the results displayed by the returns of St. Thomas's Hospital, *unless they can be satisfactorily explained as being due to some inevitable and irremovable conditions*, I must say that I have grave doubts about the advantages gained by the populace of London from the palatial edifice on the Albert Embankment." I must ask your attention to the words here underlined; and I trust that, in justice to me, you will insert this my last letter on the subject, at least at present.—I am, &c.,

Birmingham, August 31st, 1877. LAWSON TAIT.

*** This discussion has now reached a point at which it may be conveniently closed.—ED. L.

"A POCKET INSULATED SURFACE THERMOMETER."

To the Editor of THE LANCET.

SIR,—As the maker of Dr. Mortimer Granville's Pocket Insulated Surface Thermometer, I feel called upon to reply to two points raised by Dr. Dupré's letter in your issue of last week. The first is an implied want of accuracy on account of the tube being circular. In answer to this I would say I am prepared to guarantee the accuracy of each one turned out by me, and furthermore to furnish where required a *Kew verification*. The other point refers to this thermometer being a *non-registering* one. To this I would simply say that it was at Dr. Mortimer Granville's special request this was made without a register, as he attaches considerable importance to the results to be obtained from experiments now being made in taking the temperature and force of the breath, in which case it is obvious to everyone a register would be useless. Your kind insertion of this in your next issue will much oblige

Your very obedient servant,

H. STEWARD,

Strand, September 4th, 1877. Optician.

AN ETHER INHALER.

To the Editor of THE LANCET.

SIR,—Mr. Ormsby, of the Meath Hospital, Dublin, having asked me to try his "Ether Inhaler," made by Coxeter and Son, London, with some cases in the Netley Hospital, having first kindly allowed me to see the method of administration, I have had great pleasure in doing so, and now beg to offer my experience with his instrument in seventeen cases.

The shortest time taken to place a patient under the influence of ether with this inhaler was one minute forty seconds, and the longest ten minutes, the delay in the latter being entirely due to the want of attention to some details. The average time taken in the seventeen cases was four minutes ten seconds.

The average quantity of ether used was one ounce four drachms, which included that expended during operative measures; one operation being that of ligature of the external iliac artery, which took nineteen minutes, and another excision of the elbow-joint, twenty-five minutes; both of these operations only required two ounces six drachms of ether. Mr. Ormsby's inhaler is simple in construction, and if properly adjusted acts more speedily, and with a smaller quantity of ether, than any I have seen or used.

Considering the risk of life attendant on the administration of chloroform, while that of ether is so very small, one cannot but feel that with such a safe and convenient means of mitigating the sufferings of man in surgical operations, a surgeon takes upon himself a grave responsibility when he uses chloroform as an anæsthetic in preference to ether (when a choice is available) unless circumstances did not admit of the latter being administered.

Yours truly,

J. H. PORTER,

Surgeon-Major, Assistant Professor of Military Surgery,

Sept. 7th, 1877. Army Medical School.

THE ASTLEY COOPER PRIZE.

To the Editor of THE LANCET.

SIR,—I entirely endorse all that "Justice" says in extenuation of the physicians and surgeons of Guy's Hospital up to the time of their discovery that the essay was a joint production (whether German or English matters not); but having made this discovery, I maintain that it does not redound to their credit that they persisted in the award. There can be no doubt that the proper course of proceeding would have been to have opened the envelope bearing the motto of the next best essay. Morally, at least, they were bound to do so.

"Justice" intimates that they were legally bound to pass over the joint production, and to award the prize to the "successful candidate." The legal obligation is, I fear, doubtful. With regard to the moral, and, as you express it, the professional obligation, I would fain hope that after your remarks, both last week and the week before, these gentlemen may be induced to review their decision. Whether they do so or not, I for one am not eager to appeal to "the glorious uncertainty of the law," feeling that, whatever the final decision may be, the position I take, by leaving the matter to their conscientious consideration as gentlemen and professional men of high standing, is higher than if I took part in a legal squabble.

Although I still feel that I am at present unfairly treated, there can be no doubt that in my case, as in the case of all other candidates, *labor ipse pretium*.

I remain, Sir, your obedient servant,

Sept. 3rd, 1877. AN UNFAIRLY-TREATED CANDIDATE.

BIRMINGHAM.

(From our own Correspondent.)

THE last quarterly sanitary report of Dr. Hill, the medical officer of health, shows that the death-rate has been considerably higher than in the corresponding spring quarter of the last four years, and has amounted to 25·06. The zymotic deaths were 361, and represent an annual death-rate of 3·8 per 1000 of the zymotic diseases: measles has been the most fatal, causing 126 deaths, and pertussis occupies the second position, with 103 deaths. There were only 19 reported cases of variola, all of which were described as vaccinated. Sixteen of these cases were removed to the Borough Hospital, and two proved fatal. Thirty-four samples of well-water were examined during the quarter, and the water from all being largely contaminated with sewage, steps were taken to close the wells. During the last few weeks the death-rate has continued very high. Last week it was 26·9, and the average of the past three weeks has been 25·9. This is due to the prevalence of diarrhœa, and the deaths have been chiefly in infants under one year, caused, as Dr. Hill suggests, by improper feeding and neglect on the part of mothers, arising from ignorance or indifference. It is to be hoped that by free popular lectures, such as that which Dr. Ogle is going to

deliver to-night on "Food in connexion with the Laws of Health," to classes of the Midland Institute, distribution of tracts on sanitary subjects, and better education of the wives and children of the working-classes on all matters connected with the preservation and maintenance of health, will lead to a diminution, if not to the entire removal, of diarrhœa from the list of diseases which swell the mortality of our large towns.

A useful proposition is under consideration by the Town Council—namely, the establishment of a central Coroner's Court, so that one jury instead of three or four would have to be empanneled each day, and the coroner, jurors, and witnesses would meet in a commodious apartment instead of the wretched stuffy public-house parlours and smoke-rooms in which they at present have to conduct their investigations. The corporation buildings, now in process of erection, might easily be arranged so as to provide the necessary jury-room with a mortuary, and, what is still more urgently needed, a suitable and well-lighted post-mortem room.

Cocoa and coffee houses, which have been so successful in Liverpool, have now been introduced here with apparent success, as we hear of upwards of 2000 gallons being sold weekly. Attractions, in the way of reading-rooms supplied with newspapers, chess, &c., have been added, and thus a formidable competitor to the present public-house system has been established. Such a measure is calculated to be far more efficacious in promoting sobriety than any number of fervid discussions of the merits of the Permissive Bill.

The Provident Dispensary system is to be tried in Birmingham, a large meeting having decided that "it is calculated to confer great benefit on the industrial population of the town." Whether it will have the effect of diminishing the amount of gratuitous medical advice dispensed at our local charities and, at the same time, "add largely to the professional incomes of the practitioners of the town," as its warmest supporters declare it will, remains to be seen. Dr. Monckton, of Rugeley, has recently published a pamphlet on the subject, from which it appears that in his neighbourhood the provident system has been in operation some years and has worked uncommonly well. But even he admits that improper cases may, without a very careful administration of the system, be admitted as patients, and thus another be added to the already too long list of institutions by which the professional man is deprived of his just fees. The question now under discussion is, whether the provident system shall be engrafted on the General Dispensary, which is at present a popular charity; whether it shall be carried out at the new dispensaries shortly to be established from the Sands Cox endowment, or whether it shall be started on a perfectly independent basis.

At the forty-seventh annual meeting of the Birmingham and Midland Eye Hospital a report was read showing that the number of out-patients was 30 per cent. greater than it was ten years ago, and that there was great difficulty in finding suitable accommodation for the patients. Mr. Chesshire, the senior surgeon, advocated the erection of a new building, pointing out that of the £10,000 required for that purpose, they had already a balance of £5000 at their disposal.

Last Friday Dr. Bell Fletcher resigned the office of physician to the General Hospital. His thirty years' connexion with that institution, and his zeal and devotion in promoting its interests to the best of his strength and ability, entitle him justly to the warmest thanks of the governors of that charity. The committee, who received the resignation, did a graceful act in at once deciding to place Dr. Bell Fletcher's portrait in the board-room of the charity, in memory of his long services. It will, however, be a source of regret to the whole profession to learn that Dr. Fletcher is retiring from active practice, and I doubt not that some public expression will take place of the esteem and regard in which he is held by his professional brethren, and some practical recognition made of the value of the services he has rendered to the town and district.

The Birmingham Medical Institute has happily succeeded in obtaining a central site for its new building, and the Rev. Mr. Inge, the generous donor of the land on which it was first proposed to build, has consented to waive the conditions originally imposed, and to allow the institute to be erected where it can be placed most conveniently for its members.

Birmingham, Sept. 9th, 1877.

Obituary.

SIR FRANCIS HICKS.

BY the premature death (at the age of 56) of its treasurer, Sir Francis Hicks, St. Thomas's Hospital has sustained a scarcely reparable loss. For more than twelve years the chief responsibility of the rebuilding, reorganisation, and administration of the hospital has rested on him, the president, Sir John Musgrove, being incapacitated by illness. When, in 1864, advancing years led to the resignation of his able predecessor, Mr. Baggallay, the plans for the new building were already matured. It is generally believed that Mr. Baggallay himself, a shrewd judge of men, selected Sir Francis (then Mr.) Hicks to carry out the task. And the subsequent conduct of the whole business by Mr. Hicks more than justified the selection. His commercial and public life had already shown him to be keen of sight, energetic in action, self-reliant, and of the highest honour. With these qualities he brought to the service of the hospital a never-tired devotion, which had much to do with the shortening of his life, for the difficulties of his position were many and great. The plans committed to his hands involved a heavy expenditure and a ceaseless strain on the resources of the charity. At every step in their progress he met criticism from within and from without. In the conflict of interests necessarily attending a complete change of administration he was the arbiter; and, as arbiter, could scarcely fail to make enemies—could not avoid causing many bitter heartburnings. But considerations of this kind made him neither slack or feeble on the one hand, nor vindictive on the other. Rigorous to a degree in demanding from himself a complete discharge of all duty, he was strict in requiring from others the observance of their faith, in maintaining discipline, and in opposing unfairness. A sensitive regard for absolute justice forbade him to conciliate in advance where he felt that reason would in the end approve. And so his very truth and manliness may have prevented him from being understood by some who were brought into contact with him.

Amid such difficulties he worked on, strengthened by his devotion, and supported by the sense of the sacred nature of the work in which he was employed. The building was at last completed, and at the opening, in 1871, he received knighthood at Her Majesty's hands.

Soon after the completion of the hospital the rating question arose and gave him great trouble. In the litigation that ensued the hospital, as is well known, was defeated, and of course with damage to its finances. The new administration was not carried on without many difficulties; but it is satisfactory to record that during the last few years his high qualities were fully recognised by the staff and residents, as well as by the governors, and that a cordial spirit of co-operation had taken the place of the suspicious attitude of earlier days.

The ability, the power of work, the energy and will, and the self-devotion of Sir Francis Hicks had been early known. It was left for time to show his warmth of heart, his unselfish manliness, his sensitive hiding of many a generous thought and act.

Medical News.

APOTHECARIES' HALL.—The following gentlemen passed the examination in the Science and Practice of Medicine and received certificates to practise on August 30th and September 6th:—

Bately, Robert Godfrey, Balaam-street, Plaistow.
Bottrell, James Francis Henry, Bloomsbury-square.
Buckle, John, The Oaks, Catton, Norwich.
Edwardes, William Whitfield, Llansantffraid, Oswestry.
Hooker, Joseph Stenson, Watling-street.
Knox, Charles, Claughton, Birkenhead.
Leah, William, Birchfield, Birmingham.
Salter, John Reynold, Taunton.
Steventon, Walter Thomas, Snaith, Yorkshire.
Trevan, Frederick Adolphus, Port Isaac, Cornwall.

The following gentlemen also passed the Primary Professional Examination:—

Ashley Colston Bridges, St. Mary's Hospital; Ernest Edward Griffiths, John Puckey Pearce, and Ridley Manning Webster, Middlesex Hospital; Jas. William Jeram, St. Bartholomew's Hospital; George Smith Ward, King's College; Herbert Elliston Wright, Guy's Hospital.

MR. THOMAS SPAIN, Surgeon, has been placed on the Commission of the Peace for the Township of Nenagh.

DR. B. W. RICHARDSON lectured this week in Dublin, under the auspices of the Dublin Total Abstinence Society.

A NEW INFIRMARY for the Holborn Union is about to be built at Highgate, and the preliminary works are already in progress.

MR. GEORGE OWENS MEAD, Senior Surgical Scholar (1877) of St. Bartholomew's Hospital, son of Dr. Mead, of Newmarket, has been appointed one of the surgeons of the National Society for the Aid of the Sick and Wounded in War.

AT a general meeting of the Société Française d'Hygiène, held at Paris on the 19th ult., James Christie, A.M., M.D., &c., Glasgow, author of the "History of Cholera Epidemics in East Africa," was unanimously elected a Foreign Associate Member of the Society.

THE next examination for the certificate in Sanitary Science of the University of Cambridge will begin on Oct. 2nd. Application for admission to this examination, which is open to all whose names are on the Medical Register of the United Kingdom, should be made to Professor Liveing, Cambridge, on or before Sept. 18th.

HOSPITAL SATURDAY FUND.—The amount received by this fund up to Wednesday last was about £2500. This is exclusive of the sum collected in the streets on Hospital Saturday, which will be announced in a day or two. The amount, as at present known, is about £300 in excess of the sum received at the corresponding date last year. M. Leopold de Rothschild, one of the vice-presidents, has sent a donation of £50.

THE DEATHS of 2048 persons were registered in the eight principal towns of Scotland during August, of whom 1047 were males and 1001 females. Allowing for increase of population, this number is 480 under the average for the corresponding month during the last ten years. Of the 2048 deaths recorded, 845, or 41 per cent., were of children under five years of age. In Aberdeen, 26 per cent. of the persons who died were under five years of age; in Paisley, 35; in Edinburgh, 36; in Greenock and in Perth, 38; in Leith, 39; in Dundee, 41; and in Glasgow, 47 per cent.

Medical Appointments.

ALLEN, A. H., F.C.S., has been appointed Public Analyst for Chesterfield, at 21s. per analysis for the first fifty, and 10s. per analysis beyond, in each year.

ANNINGSON, B., M.B., M.R.C.S.E., has been reappointed Medical Officer of Health for the Cambridge Urban Sanitary District.

ASHBY, Dr. H., has been appointed Demonstrator of Physiology at the Liverpool Royal Infirmary School of Medicine.

ATKINSON, H. S., L.S.A.L., has been appointed Resident Medical Officer to the General Hospital, Queenstown, vice Malone, deceased.

BATEMAN, F., M.D., F.R.C.P.L., has been appointed Consulting Physician to the Essex Hall Asylum for Idiots, Colchester, vice Williams, deceased.

BRIGGS, H., M.B., M.R.C.S.E., has been appointed Demonstrator of Anatomy at the Liverpool Royal Infirmary School of Medicine.

CASSELS, J. P., M.D. & F.F.P.S.G., has been appointed Surgeon-Aurist to the Royal Infirmary, Glasgow.

COLLINS, H., L.R.C.P.Ed., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer and Public Vaccinator for the Winslow District and the Workhouse of the Winslow Union, and Medical Officer of Health for the Winslow Rural Sanitary District, vice Denne, deceased.

CUMING, J., M.D., L.K.Q.C.P.I., has been reappointed a Physician to the Royal Hospital, Belfast.

DREW, C. W., L.R.C.P.Ed. & L.M., M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for the Quorndon District of the Barrow-upon-Soar Union, at £45 per annum and fees; and Medical Officer of Health for the Quorndon Sub-district of the Barrow-upon-Soar Rural Sanitary District, at £20 per annum, vice Wood, resigned.

EWEN, A. B., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Exmouth District of the St. Thomas Union, Exeter, vice Land, resigned. £72 per annum and fees.

FAGAN, J., L.K.Q.C.P.I., F.R.C.S.I., has been appointed a Surgeon to the Royal Hospital, Belfast, vice Moore, resigned.

GOODALL, J., L.R.C.P.L., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for No. 1 District and the Workhouse of the Lincoln Union, vice Broadbent, deceased.

HAINES, A. H., M.R.C.S.E., L.S.A.L. (not Mr. Measures, as previously reported), has been appointed Medical Officer of Health for the Wisbech Port Sanitary District, vice Ewen, resigned.

HANSON, W., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer and Public Vaccinator for the newly-formed Kinsham District of the Kington Union.

HARKER, J., M.D., L.R.C.P.Ed., has been reappointed Medical Officer of Health for the Lancaster Rural Sanitary District for six months.

HARRISON, C., M.D., M.R.C.S.E., L.S.A.L., has been appointed Public Vaccinator for No. 1 District of the Lincoln Union, and Certifying Factory Surgeon for the Lincoln District, vice Broadbent, deceased.

HAYDON, W. R., M.D., has been appointed Medical Officer for the Washfield District and the Workhouse of the Tiverton Union, vice Thomas, deceased.

HOOPER, A., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer of Health for the No. 2 Sub district of the Burton-on-Trent Rural Sanitary District, at £50 per annum for three years.

KNOTT, Mr. S. J., has been appointed Surgeon to the Western General Dispensary.

LAWSON, T. C., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Berkhampstead District and the Workhouse of the Berkhampstead Union, vice Whately, resigned.

LYNDON, G., L.R.C.S.I., L.K.Q.C.P.I., & L.M., has been appointed Medical Officer, Public Vaccinator, &c., for the Bellananagh Dispensary District of the Cavan Union, vice O'Reilly, deceased.

MARTIN, S. E., M.D., M.R.C.S.E., has been appointed Medical Officer to the Newry Union Workhouse and Fever Infirmary, vice Davis, resigned, at £100 per annum, and £20 per annum as Consulting Medical Officer of Health.

MOORE, C. A., M.B., C.M., has been appointed House-Surgeon to the Royal United Hospital, Bath, vice Brown, resigned.

MOORE, J., M.D., M.R.C.S.E., has been appointed a Consulting Surgeon to the Royal Hospital, Belfast, on resigning as surgeon.

PEACOCK, E., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer of Health for the Bulkington Urban Sanitary District, vice Pitt, resigned.

PIERIS, G. F., L.R.C.P.Ed., L.R.C.S.Ed., & L.M., has been appointed Assistant-Surgeon to the Cape Copper Mining Company, vice Vowell, whose appointment has expired.

PLUMBE, S. T., M.R.C.S.E., L.S.A.L., has been appointed House-Surgeon to the Kent and Canterbury Hospital, vice Thomson.

RHODES, W., M.R.C.S.E., has been appointed Resident Medical Officer to the Birmingham and Midland Free Hospital for Sick Children, vice Moxon, resigned.

ROBBINS, J., M.B., C.M., has been appointed House-Surgeon to the Grimsby and District Hospital.

ROBERTSON, J. D., M.D., L.R.C.S.Ed., has been reappointed Medical Officer of Health for the Penrith Urban Sanitary District.

SANDFORD, H. V., L.R.C.P.L., L.F.P.S.G., has been reappointed Medical Officer of Health for the Bromyard, Hereford, Ledbury, Leominster, and Weobley Rural Sanitary Districts, at £550 per annum for three years.

SHORTRIDGE, T. W., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer of Health for the Honiton Urban Sanitary District, vice Macaulay, whose appointment has expired.

SMITH, S. J., M.D., L.R.C.S.Ed. & L.M., has been appointed Medical Officer of Health for the No. 1 Sub-district of the Burton-on-Trent Rural Sanitary District, at £50 per annum for three years.

THOMSON, W., M.D., has been re-elected Medical Officer of Health to the Peterborough Urban and Rural Sanitary Authorities.

TYNER, E. G., L.R.C.S.I., L.K.Q.C.P.I., & L.M., has been appointed Assistant Medical Officer to the Wiltshire Lunatic Asylum, Devizes, vice Masterton, resigned.

VAN, A. F., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer and Public Vaccinator for the No. 4 District of the Wimborne and Cranborne Union, vice Underhay, resigned.

WALCOTT, H. L., M.R.C.S.E., has been appointed Resident Medical Officer to the Eastern Dispensary, Bath, vice Cameron, appointed Medical Officer for No. 2 District of the Bath Union.

WHITE, E., M.D., M.R.C.S.E., L.S.A.L., has been appointed an Honorary Medical Officer to the Birmingham Lying-in Charity, vice Tait, resigned.

WILLIS, G. O., L.R.C.P.Ed., L.F.P.S.G., has been appointed Medical Officer and Public Vaccinator for the Rockfield District of the Monmouth Union, vice Norman, resigned.

WILSON, G., M.D., has been reappointed Medical Officer of Health for the Lillington, Milverton, Rugby, and Warwick Urban, and Meriden, Rugby, Solihull, Southam, and Warwick Rural, Sanitary Districts, at £300 per annum for three years.

WOODBURN, J. C., M.D., L.F.P.S.G., has been appointed Dental Surgeon to the Royal Infirmary, Glasgow.

BOOKS ETC. RECEIVED.

Dr. C. B. Taylor: Clinical Lectures on Diseases of the Eye.
A. T. Norton: The Examiner in Anatomy.
Dr. Jacobi: The Question of Rest for Women during Menstruation.
E. Dowden: Shakspere.
R. M. Gurnell: A Critical Review of the Titchborne Trial.
British Journal of Dental Science. September.
The Practitioner.
Medicinal Plants. Part XXIV.
Cassell's History of India. Part XXI.
The Veterinarian. September.
The Veterinary Journal. September.
S. Weir Mitchell on Fat and Blood.
Dr. A. Davidson: Aretina sy Fanasitranana.
W. H. Blanch: The Bluecoat Boys, or School Life in Christ's Hospital.
Low's Handbook to the Charities of London for 1877-78.

Births, Marriages, and Deaths.

BIRTHS.

ADAM.—On the 6th inst., the wife of James Adam, M.D., Medical Superintendent of the Metropolitan Asylum District Asylum, Caterham, of a son.

ADAMS.—On the 5th inst., at Rippingale, Lincolnshire, the wife of George Norris Adams, M.B., of a son.

BAKER.—On the 28th ult., at Wimpole-street, the wife of William Morrant Baker, F.R.C.S.E., of a son.

CARTER.—On the 26th ult., at Lynton House, Anerley-road, Anerley, the wife of G. Roe Carter, Esq., L.R.C.S.I., L.K.Q.C.P.I., &c., late Colonial Surgeon of St. Lucia, W.I., of a daughter.

LAWSON.—On the 2nd inst., at Berkhamstead, the wife of Thomas C. Lawson, M.R.C.S., L.S.A., of a daughter.

MCIVER.—On the 3rd inst., at Cookstown, the wife of William McIver, M.D., of a son.

RENTON.—On the 7th inst., at Viewlands, Blackhill, co. Durham, the wife of George Renton, M.D., of a son.

WHITWELL.—On the 10th ult., at Ghazipur, N.W.P., India, the wife of Dr. H. Whitwell, Benares Opium Agency, of a daughter.

MARRIAGES.

LAMB—PHIPPS.—On the 9th ult., at the Church of St. Colombo, Collingtree, by the Rev. R. M. Lamb, M.A., brother of the bridegroom, and the Rev. W. L. Gibson, William Henry Lamb, M.B., of Kensington-park-gardens, second son of the late Rev. R. M. Lamb, M.A., to Agnes Mary, eldest daughter of Pickering Phipps, Esq., M.P., of Collingtree Grange, Northamptonshire.

PEARLESS—RAIKES.—On the 18th June, at Christ Church, South Yarra, Australia, by the Rev. W. N. Guinness, Walter Reif Pearless, M.R.C.S.E., of East Grinstead, Sussex, to Marianne Sessel, eldest daughter of H. Campbell Raikes, late Bengal Civil Service, of Weston-super-Mare, Somersetshire, and niece of Sir Arthur Nicholson, Bart., of Richmond, near Melbourne.

ROBOTHAN—WILKIE.—On the 3rd inst., at St. Mary's, Islington, George Beckett (second son of Dr. Robothan, of Risca, Monmouthshire), Surgeon, of York Villas, Preston Ville, Brighton, to Frances Elizabeth Muirhead, eldest daughter of John Paull, Esq., of Langford, near Bristol, and widow of the late Joseph Wilkie, Esq., M.L.A. & J.P., of Melbourne, Australia.

SHAPTER—BAYLY.—On the 3rd inst., at St. Sidwell's Church, Exeter, by the Rev. Canon Blackall, assisted by the Rev. H. D. Shapter (uncles of the bridegroom), Lewis Shapter, M.D., of The Barnfield, Exeter, to Charlotte, youngest daughter of Captain E. Bayly, of Friars Lodge, Exeter.

THOMSON—FERGUSON.—On the 28th ult., at Albyn-place, by the Rev. John Watt, of Fetteresso, George Thomson, Surgeon 1st Punjaub Cavalry, to Catherine Macdonald, third daughter of John Ferguson, Advocate in Aberdeen.

DEATHS.

BRUMWELL.—On the 7th inst., at Upton-road, Ryde, John Robert Brumwell, M.D., aged 46.

BUCHANAN.—On the 4th inst., at Dijon, Andrew Buchanan, M.D., aged 69.

DOWMAN.—On the 4th inst., at Hartland, Devonshire, Joseph Rymer Dowman, M.R.C.S.E., aged 37.

HENTSCH.—On the 8th inst., at Bruce-road, Bromley-by-Bow, Ellen, wife of J. P. Hentsch, M.R.C.S.E., aged 34. Friends will please accept this intimation.

HILEY.—On the 6th inst., James Hiley, M.R.C.S.E., of Elland, Yorkshire, aged 63.

MCGREGOR.—Drowned on the 7th ult., by the sinking of his boat in Bombay Harbour, Dugald McGregor, M.D.

MERYON.—On the 11th inst., at The Grove, Hammersmith, Charles L. Meryon, M.D., aged 96.

PIDDELL.—On the 3rd inst., at Stephen's-green, Dublin, Samuel Piddell, M.R.C.S.E., formerly of Kildorrery, co. Cork.

RANDOLPH.—On the 8th inst., John Randolph, M.R.C.S.E., of Bessborough-gardens.

SLACK.—On the 29th ult., at Rodney-street, Liverpool, Henry Wright Slack, L.R.C.P.Ed., aged 54.

TURNER.—On the 9th inst., at Keith, Banffshire, Robert Turner, M.D., aged 64.

[N.B.—*A fee of 2s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*]

Notes, Short Comments, and Answers to Correspondents.

TREATMENT OF BURNS AND SCALDS.

THE efficacy of bicarbonate of soda as a topical application in burns and scalds has been advocated by Dr. S. F. Waters, of Salem, U.S.A. At a recent meeting of an American Medical Society, Dr. Waters is stated to have demonstrated the value of the remedy on his own person. He allowed boiling water from a sponge to flow over his right wrist, a severe scald being the result. He then applied bicarbonate of soda to the scalded surface, and laid over it a wet cloth. The pain was almost immediately removed, and the next day only a slight discolouration of the skin of the injured part remained.

Mr. J. H. Walter.—Parkes's Hygiene; Wilson's Handbook of Hygiene; Angus Smith on Air and Rain; Reports of Medical Officer to the Privy Council.

Dr. Julius Pollock.—The paper will appear as early as possible.

PUERPERAL FEVER IN LYING-IN HOSPITALS.

THE last Weekly Return of the Registrar-General records the most recent instance of the fatal result of the persistence with which the authorities of our lying-in charities cling to the maintenance of the hospital system. Two deaths from puerperal fever were registered during the week ending 8th instant in the General Lying-in Hospital in York-road, Lambeth. It is stated that no less than 13 deaths of puerperal women have been registered in this institution since the beginning of the year, although the births of only 155 living children have been there registered. This signifies that the mortality of mothers has been in the proportion of 84 per 1000 infants born alive. It should be remembered that the average deaths of mothers to 1000 infants born alive in England and Wales in the 20 years 1847-75 were 5; the smallest proportion being 4·2 in 1857 and 1869, and the largest proportion 6·9 in 1874. The Registrar-General pointed out in his Annual Summary for 1876 that during that year the deaths of mothers in the five metropolitan lying-in hospitals were equal to 25·7 per 1000; whereas in the rest of London, after correcting the number of births registered, for still-births and for twins, the death-rate of mothers in London, outside these institutions, did not exceed 4·4 per 1000 deliveries. The Birmingham Lying-in Charity abandoned the hospital system so long ago as 1869, and, under a system of out-door attendance by selected midwives and honorary surgeons, the deaths of but 13 mothers occurred among 4423 delivered through the agency of the charity during the five years 1872-76; the proportion of this mortality was as low as 2·9 per 1000 deliveries, a result which is surely worth the serious consideration of the authorities of the five lying-in hospitals in London. It will be observed that as many deaths have occurred in the General Lying-in Hospital among the 155 deliveries in that institution during the present year, as among the 4423 deliveries conducted under the auspices of the Birmingham Lying-in Charity during the last five years. It is said that the General Lying-in Hospital is now to be closed for six months, and we believe that two of the other four hospitals of this class are already closed from similar causes. The question is, ought they to be re-opened?

H. B. K.—To the Office of the Registrar-General, Somerset House, Strand, London.

Mr. Vernon Collier.—Please send date of communication.

DISEASED MEAT AS FOOD FOR MAN.

To the Editor of THE LANCET.

SIR,—In reference to Mr. Simcock's letter on the above subject, which appears in the current number of THE LANCET, permit me to make the following observations.

I quite agree with Mr. Simcocks that many persons eat, without apparent injury, the flesh of animals killed whilst suffering from contagious pleuro-pneumonia. People also habitually drink water which is highly contaminated with sewage, and yet suffer apparently no injury thereby. People also habitually breathe a highly impure atmosphere apparently with perfect impunity. As a rule, bad water and vitiated air do not kill like arsenic or strychnine; neither does the flesh of diseased animals. But just as one naturally prefers pure water and fresh air to sewaged water and a polluted atmosphere, so the immense majority of the purchasers of meat retain an old-fashioned prejudice against the use of the flesh of animals affected with virulent disease.

It is difficult to trace cases of illness to the use of the flesh of pleuro-pneumonia-affected oxen, because it is very rarely that those who eat such flesh are aware of its nature. I have, however, frequently met with cases of illness attributed by those affected to the use of meat which, from its appearance, I had no doubt was part of the carcase of an animal that had pleuro-pneumonia. The eminent veterinarian, Professor Gamgee, states that he was able to satisfy himself that the flesh of animals affected with pleuro-pneumonia produced disease in man, and the late Dr. Letheby has published a statement to the same effect. According to the late Dr. Livingstone, such flesh produces amongst both the Europeans and negroes resident in South Africa malignant anthrax, and the Registrar-General for Scotland has drawn attention to the remarkable increase in the mortality from carbuncular diseases since pleuro-pneumonia has become endemic amongst the herds of Scotland. The same increase of deaths from carbuncular diseases has been observed in England.

I think it is manifestly unfair that the flesh of diseased animals should be sold by implication as that of sound animals. If the local authorities permit it to be sold, they ought to follow the example of the Newry Board of Guardians, who announce the name of the person to whom they have sold animals affected with pleuro-pneumonia in the last stage of the disease.

Your obedient servant,
CHARLES A. CAMERON,
September 1st, 1877. Medical Officer of Health for Dublin.

A QUERY.

IN the Life of Mrs. Godolphin, by John Evelyn (edited by Samuel Lord Bishop of Oxford, published by William Pickering, 1847), the following passage occurs. It is in reference to the treatment of a lady just after her confinement, September, 1678. A correspondent asks if any light can be thrown upon the "pidgeons":—"She was now in a manner spent, and no't could physitians do, when neither the cupping nor the *pidgeons*, those last of remedyes, wrought any effect."

Dr. J. W. Nicholls, Dr. Keay, Mr. Denny, and others will find an answer to their queries with reference to medical service under the Red Cross in our number of August 11th, page 227.

S. G.—The answer to such a question as our correspondent puts is best procured by private inquiry. There is a delicacy about publishing particulars of the sort.

Mr. Geo. Charlton.—We cannot answer the question.

THE EUCALYPTUS GLOBULUS.

AN important report has recently been published by the Foreign Office from the pen of Colonel R. L. Playfair, our Consul-General at Algiers, relative to the growth of this tree in North-West Africa. The evil consequences that followed the destruction of forests in the neighbourhood of Tunis as well as of Algeria have been a subject of serious concern, and it is found that the planting of the Eucalyptus is the best practical remedy. The Eucalyptus grows very quickly, and, according to Colonel Playfair's report, attains in Algeria in six or seven years the dimensions of an oak of twenty years' growth, producing at the same time hard and dense timber, so dense indeed that, until properly seasoned, it sinks in even salt water. The improvement that has taken place in the sanitary surroundings since these trees were planted is very marked; for they appear to destroy miasma by absorbing the moisture of the soil, and so assisting to drain the marshes. More than 100,000 Eucalyptus trees have been planted in two years by the Managers of the Mokta-el-Hadid Iron Mines, the result of which is that their workmen can now live at the place all the year round.

Febris.—Dr. Parkes: Elimination of Nitrogen (Croonian Lectures, 1871), published in THE LANCET. Dr. Ralfe: Outlines of Physiological Chemistry, p. 225. Neubauer and Vogel: Analysis of Urine, p. 240.

Messrs. J. Allen and Son, of Marylebone-lane, W., have shown us a slight modification of their Portable Turkish Hot Air and Vapour Bath, by which the apparatus may be adapted for mercurial fumigation.

Dr. Wm. Whitelaw.—The paper shall be published at the earliest opportunity.

AUSTRALASIA FOR PHTHISICAL PATIENTS.

To the Editor of THE LANCET.

SIR,—In a few weeks those invalids migrating to more genial climes will be setting out for their winter quarters. Heretofore most of them have been content with sojourning further south than this country, but still north of the equator, principally visiting southern France, Italy, or Egypt, of all of which I have a very painful experience; for in phthisical cases I have seldom seen much benefit derived from visits to them. Doubtless some patients, however, do derive benefit from them, though many more do not; and until I had had experience of a far greater change of climate, quite to the southern hemisphere, I was of opinion that it was better for phthisical patients to stay in England, with all the comforts of English homes surrounding them, than to seek sunnier climes, it is true, but without a tithe of the comforts they would leave behind them. I have, however, since seen such benefit derived from entire change of climate, such as is obtained by a voyage to Australasia and some residence there, so often seen tubercular cavities in the lungs heal, that I strongly advise those patients who have sufficient strength left fairly to undertake a long journey, and in whose lungs the cavities are not extensive, to eschew Southern Europe and North Africa, and take a voyage to Australasia. Leaving England for Melbourne in September in one of the magnificent steamers now sailing thither, they should reach Melbourne in six weeks (the Oriental line s.s. *Lusitania* has just done it in forty days, and the Colonial line boats in forty-three days), and during the whole time they would not only enjoy rest, but have all the luxuries of a first-rate hotel; for I was on board the Oriental line s.s. *Chimborazo* that left Plymouth a few days ago, and, with no small experience of ships, I never saw a vessel promising more real comfort in every way for her passengers; and the *Cuzco*, sailing late in September, and the *Lusitania*, now about to return to England, are sister ships of the *Chimborazo*, and each of nearly 4000 tons register. Steam-heating apparatus and an ice-house, ample live stock (I noticed six short-horns for beef, a number of South Downs for mutton, besides turkeys, geese, ducks, and fowls in the *Chimborazo*, and she was to supplement these with fresh supplies of each of them at St. Vincent), and an excellent cuisine, are not only comforts, but necessaries for invalids; and although I have no personal interest whatever in the matter, I was so pleased with all I saw on board her, and have so vivid a remembrance of all that one very dear relative, whom I accompanied to Italy and Egypt some years ago, suffered from want of ordinary necessaries for an invalid, especially in the way of diet &c., notwithstanding our frequenting the best hotels, that I cannot help pressing on my professional brethren how fortunate I should have esteemed my poor relative could we have had one of these fine, well-provided, and full-powered steamships to travel by.

I have since had some nine years' experience in the southern hemisphere, and may briefly say I should advise patients to leave England in September, to spend a very short time in Melbourne on arrival, but to proceed by steamer to Cook's Straits in New Zealand, enjoy the beautiful climate of Nelson for a time, and thence proceed by sea to Canterbury and Otago as the summer progressed, and as it waned go north again to Nelson and Auckland, and cross to New South Wales, after a time dropping down thence to Melbourne, and leaving for England *viâ* the Suez Canal, the route taken by the Oriental line and the Peninsular and Oriental boats, so as to reach England about the third week in June. I believe that if any reparative power existed in a phthisical patient it would be evoked by such a trip.

Yours faithfully,

Torquay, August 24th, 1877. ALFRED ECCLES.

RELAPSING FEVER IN BOMBAY.

WE have to thank a lay correspondent in Bombay for a communication with reference to the article in THE LANCET on this subject.

Enquirens.—There is nothing essentially *infra dig.* in bringing out such a book if it is well and impartially executed. For practice in the countries mentioned, there must be compliance with the laws regulating medical practice in each respectively.

A Constant Reader.—There would be no harm in calling, under the circumstances.

Mr. Frank Marsh should apply for special information to the Colonial Agent for the Cape, Crown Agent's Office, Downing-street, S.W.

L.R.C.P. Lond.—Certainly so.

TANSY IN PRURITUS VULVÆ.

DR. RICHARD L. BUTT, of Midway, Alabama, extols the use of tansy (*Tanacetum hortense*) for the relief of pruritus vulvæ. He has found a poultice made of the leaves of the plant, and applied as hot as the patient can bear it, to be efficacious when leeches to the thighs, washes of borax, lead, zinc, nitrate of silver, sulphate of copper, &c., had been tried in vain. The editors of the *American Practitioner*, which records the above, think that possibly the mode of using the tansy, in poultice and as hot as can be borne, has something to do with the success which has attended the treatment in the hands of Dr. Butt.

Inquirens.—There is no recent work on Skin Diseases with coloured plates. The Atlas lately prepared by Dr. Tilbury Fox, and published by Churchill, will perhaps be the best for the purpose.

Dr. Fergus shall be answered in this column next week.

THE INDIAN MEDICAL SERVICE.

To the Editor of THE LANCET.

SIR,—A good many letters regarding the Indian Medical Service have appeared in THE LANCET of late, and as such letters are likely to influence intending candidates, I beg to offer a few remarks with reference to the letter from "Beta" in your issue of June 23rd. He says, "I do not think our case is a strong one regarding the pensions, for every man knows what they are before entering the service." This is true enough, but is shirking the real question—viz., Is the present scale of pensions adequate or not? There can be no doubt in anyone's mind that a pension of £220 a year, after seventeen years' service in such a climate as that of India, is miserably inadequate; but at the same time it must be borne in mind that there are numbers of men still in the service who are members of the old Fund, which give them an additional £400 or £500 on retiring. For these fortunate individuals, therefore, the pensions are ample. Till all these pass out of the service, it is improbable that any change will be made. No doubt everyone knows what the pension rules are before entering the service; but equally undoubtedly almost everyone knows that they must be improved in the course of time—that is, when all the members of the Fund have retired. Anyone who does not come out here with that conviction must be utterly blind to his interests in the future. There are some, no doubt, who come out to India with the idea that they will be able to save a sufficient sum, which, together with their pension, will enable them to retire after about twenty years' service. I would refer such persons to the letter of another writer in your issue of the 23rd June, who says, "If he has taken the twenty months' furlough, which he is entitled to, out of the seventeen years, he will not, with careful living, have saved more than £3000." I would add that if he is married he will not save as much.

In conclusion, I heartily endorse "Beta's" statement in regard to the relations between civilians and medical men. I believe that there is no other country or service in the world where medical men hold a better position than in the Indian Medical Service.

I remain, Sir, yours obediently,

Madras, August 11th, 1877. GAMMA.

JUVENILE FORESTERS.

A CORRESPONDENT would like to be informed as to the rate for attending as surgeon a body of juvenile Foresters.

Justitia.—1. An unqualified man cannot legally practise. It is therefore difficult to understand how he can sell a practice.—2. There can be no proper partnership between an unqualified man and a surgeon in practice.

Mr. Henry A. Fitzroy Nailer should apply to the Secretary of the Association.

POISONING BY LABURNUM-SEEDS.

To the Editor of THE LANCET.

SIR,—Your correspondent, Mr. A. Milson Roberts, does good, no doubt, by the publicity he has given of his case.

Four years ago I was called to the Richmond-street School to see twenty children, who after dinner were attacked with sickness. Skin cold and clammy; pulse quick and very feeble; pupils very much dilated. With great difficulty some were roused out of the sleepy condition they were in. Great anxiety prevailed, as the children had not left the dinner table more than twenty minutes. I was quite at a loss for the moment, and should not have thought of laburnum-seed but for the fact that on the very morning of the affair I was engaged investigating the cause of death of some fowls, and was quite satisfied it resulted from swallowing the laburnum-seed. For many years we could not account for the loss. I further noticed some would eat them, whilst others would not; and secondly, I noticed that those that ate mulberries, which are just at the seedling time of the laburnum, were not affected. However, I did not push my experiments further. I gave the children bread and water, with mustard emetic. I could not find a trace of the seed in the vomit of those that suffered most, and supposed to have eaten the least. I feel sure we ought to give great attention to such a dangerous tree, which is becoming a favourite in the garden. Brandy and beef-tea, with ammonia, were administered, with mustard baths, which did good service. All recovered within twenty-four hours.

I should like to know if it (the seed) has ever been tried as an anti-spasmodic. I am of opinion it would act well.

Yours faithfully,

Plaistow, Sept. 1st, 1877. JOHN VANCE.

Medicus.—Without doubt there should be an inquest in every case of death from post-partum hæmorrhage in which a medical man is not in attendance. If coroners order burial in such cases without inquiry, the way is opened for serious wrong-doing.

L.M.—The expedient suggested is now adopted in cases which admit of the arrangement.

Mr. J. L. Sweet.—The use of the forms would have to be associated with the use of false titles to constitute a legal offence.

A. B. C.—See Report of THE LANCET Sanitary Commission on Filters and other Purifying Agents, published in 1867.

DEVILLE *versus* THE HARROGATE COMMISSIONERS.

THOSE of our readers interested in sanitary matters will remember this case, and the defeat of the defendants. Mr. S. W. North, President of the Yorkshire Association of Medical Officers of Health, writes to us to say that Dr. Deville, though victorious in the suit, is saddled with a bill of costs amounting to £144, to defray which £69 has been received. Mr. North hopes for further donations, and with that view proposes to keep open the account for a month.

Mr. W. Evans, (Anglesey.)—It shall appear as soon as circumstances permit.

COLD DOUCHE AND QUININE IN HEAT APOPLEXY.

To the Editor of THE LANCET.

SIR,—I venture to send you the particulars of the treatment of a case of heat apoplexy, as possibly it might prove sufficiently interesting for publication.

Private H. R——, aged twenty-six, service six years, was on guard on the 16th July (the temperature on that night and day never fell below 97°). He was relieved from guard on the morning of the 17th, and went and lay down in his barrack-room. At 6 P.M. the attention of some of the men in the room was attracted to the patient, who had become violently delirious. He was at once removed to hospital, and at 6.30 P.M., when I saw him, he was insensible; temperature 105°; breathing noisy; pulse very weak; heart's action fluttering; pupils contracted. He was immediately brought outside, where there was a strong breeze blowing, and douched with cold water. At 7 P.M. he was still insensible, but his temperature had fallen to 99°. Fifteen grains of neutral sulphate of quinine injected under the skin; douche discontinued. Shortly afterwards his temperature again rose to 101°. The douche was then repeated, and his temperature quickly fell to 99°, and violent convulsions of the extremities supervened. Douche at once discontinued, and ice ordered to the head. At 12 P.M. the patient was able to take a little brandy-and-water; temperature 99°; ice to be kept to his head during the night.

July 16th.—6 A.M.: Patient sensible; complained of headache; temperature and pulse normal. Ordered his head to be shaved, and a cap blister applied, also purgative draught with fifteen grains of sulphate of quinine.

21st.—Patient is now progressing towards convalescence.

When the temperature has fallen, it is necessary to use the cold douche with great caution, and to discontinue it altogether if violent convulsions are induced, as death from exhaustion will speedily follow. In these cases I usually trust to the application of ice to the head.

I am, Sir, yours obediently,
August, 1877. MAURICE KNOX, Surgeon, A.M.D.

Iota.—Taking the L.R.C.P. Edin. would not entitle our correspondent to the use of the title of "Dr." The use of the title "Physician" on the strength of this slender basis is a question of taste for individual men. It seems not illegal.

B. H. A.—Consult our advertising columns.

Mr. B. R. Bullen.—Tomes's book is one of the best English works on the subject.

COLIC.

To the Editor of THE LANCET.

SIR,—A patient of mine, a lady, aged thirty-eight, has frequent attacks of a most severe kind of colic. They come on generally about ten o'clock at night. The whole abdomen becomes suddenly distended, and the walls quite hard. The patient describes what happens "as everything seems to stop." The breathing is so much interfered with that on one or two occasions I have been really afraid that it would fail altogether. The face becomes pinched, pale, and terribly anxious. To lie down or stand alone is alike impossible. Standing against the wall or supported against some piece of furniture, or in her husband's arms, seems the only position in which breathing is possible. The pulse is sometimes intermittent, always feeble; the skin cold and moist, especially on the hands and feet. The lady has a dilated heart, and this renders me more uneasy than I otherwise should be, especially as she has had two attacks of a decidedly anginoid character.

Can any of your readers help me with regard to the causes or the treatment of these colics? Very hot applications have helped me most; but they take a long time to prepare, and I should much like to make the attacks as short as possible, if I cannot prevent them altogether.

Your obedient servant,
September, 1877. A WANDERER.

A Stranger, if a qualified medical practitioner, will always be welcomed at the general hospitals. The difficulties of introduction are easily disposed of by the presentation of a card to the physician or surgeon in attendance.

H. G. L.—The question is legal rather than medical, and may safely be left with the guardians.

Mr. Shirley Deakin.—Any communication in reply to the questions named should be personal, and made direct to the querist.

Mr. Frederick Treves.—Shortly.

"TUPELOW TENTS."

To the Editor of THE LANCET.

SIR,—In your journal of August 25th you mention the tupelow tent as superior to sea-tangle. Will you allow us to inform your readers that we have been for some time making experiments with this material, and expect shortly to arrive at very satisfactory results. It may be interesting to note in the interim that these tents are of a fine-grained, but soft woody texture, the fibres not being straight, but interwoven and collected in bundles; they have a further advantage in being easily medicated. They are introduced with facility, and, being extremely light, do not easily become displaced. They will not decompose the fluids with which they come in contact, and consequently have none of the offensiveness of sponge tents; being vegetable, they are not likely to induce septic mischief or local irritation. They can be made, when desired, so as to exert unequal pressure along the cervical canal, being cylindrical when introduced, but expanding unevenly when *in situ*.

We are, Sir, your obedient servants,
Birmingham, Aug. 28th, 1877. SALT AND SON.

General Practitioner.—Our correspondent asks us rather a formidable question. The chief books he would find useful would be Darwin's "Origin of Species"; Herbert Spencer's "Principles of Biology; Haeckel's "History of Creation" and "Anthropogeny"; Fritz Müller's "Für Darwin"; Bastian's "Beginnings of Life"; Mivart's "Genesis of Species" and "Man and Apes"; and numerous scattered papers, like those of Drysdale, and Dallinger, on the Development of Infusoria, in the *Monthly Microscopical Journal*, Huxley's address on Abiogenesis, &c. See *Nature*, passim.

POISONING BY NITRATE OF POTASH.

To the Editor of THE LANCET.

SIR,—On the 15th of August, about noon, I was called in a great hurry to see a woman who had intended to take two ounces of salts, but who by mistake had taken something that only looked like salts. Whilst swallowing she perceived the taste to be different from what it should be, but could not, however, tell what she had swallowed. The thought struck me it might be oxalic acid, and she immediately yielded to the same idea. She complained of great burning pain in the stomach, and in about five minutes vomited some glairy fluid on the floor of the room. There was no time to be lost. I at once gave her a large dose of ipecacuanha, larger indeed than was necessary, with the object of expediting matters. I gave one drachm and a half, followed by one ounce of chalk mixed up with water. After this I tried to pick up some of the vomit with a spoon. Failing in my attempt, I wiped it up with my pocket-handkerchief to take home. The cup which had contained the oxalic acid was quite empty and clean. Upon rubbing my finger, however, round the bottom, and applying it to my tongue, it tasted saltish, like nitre, and not like acid. All this time the poor woman complained pitifully of the pain in her stomach, and spoke of it as a burning pain. To help vomiting, some oil was given in milk, and immediately she brought up a quantity of brownish fluid. The pain was not relieved; she continued groaning with it, but had no convulsions. Some slight shivering and tremulous motion of the hands occurred, with an unsteady attempt at walking. The pulse was quick and feeble. The bowels acted twice within the first two or three hours. She vomited no blood; but the retching continued on and off most of the night, and she could obtain no sleep or cessation from pain.

On the 16th, the next day, I ordered a mixture containing opium to allay the pain, and applied poultices. I was now told that a quarter of a pound of saltpetre had been bought some time previously for curing some bacon, and it was thought the woman might have taken what was left of it. Acting upon this suggestion, I tested for nitre in the liquid I squeezed out of my pocket-handkerchief. I evaporated a drop on a glass slide, and found under the microscope rhombic prisms and circular crystals. Some paper dipped in another portion of the fluid, dried and burnt, deflagrated. I may here add that chlorate-of-potash paper also deflagrates; but after being burnt the ash or charred part of the chlorate is grey, whilst that of the nitre is black. In a watch-glass I evaporated a little more of the fluid, added two or three drops of sulphuric acid to the residue, with some copper filings. Upon slightly heating this mixture, reddish fumes were given off; these reddened litmus-paper, and blackened starch-paper previously moistened with solution of iodide of potassium. There was no longer any doubt as to the salt taken by my patient.

I now come to another stage of the case. Knowing what the poison was, I ought to know what the treatment should be, but I did not. I wonder how many of those who read this do know. It is a surprising fact that out of the several books I have I can find no treatment.

On the 17th, after another sleepless night, the woman showed signs of great and serious prostration. She herself felt her end approaching. She remained quite conscious, and could point to the exact place where all the mischief was. The pain was still a burning pain, a weight that did not leave her for a minute. She could take no beef-tea; the sight of it made her sick. She took nothing but cold milk-and-water. Her bowels had not acted yesterday nor to-day. An enema of warm gruel, with a quarter of a pint of castor oil, was given, with the effect of producing a satisfactory motion. She was able to pass water freely all the time. The urine and evacuations were free from blood. I regretted not having used the stomach-pump. I took it with me on my first visit, but was unwilling to use it before ascertaining what had really been taken. Towards the evening of this day she fancied the pain was relieved by the medicine; but the relief must have been only slight, for she spoke with hesitation, and was very depressed in spirits.

Aug. 18th.—On visiting her this morning I was surprised to be told she had slept some hours, and had taken some tea for breakfast. She looked up, and made an attempt at a smile. She spoke more hopefully. The pain was less intense, and had even on one occasion left her for a few minutes. She asked to discontinue the poultices. Her pulse was better; her tongue, which had been very dry, was moist, and from this day she gradually rallied.

Yours faithfully,
Bromsgrove, Sept. 6th, 1877. RICHARD WOOD.

Mr. Edw. Hereford.—We are obliged for a sight of the paper, which space will not permit us to reproduce.

R. M. can hardly need to be told that Jamaica is not a desirable place of residence.

ETIOLOGY OF ASTHMA.

To the Editor of THE LANCET.

SIR,—Could any of your readers inform me if they have ever traced the origin of spasmodic asthma to breathing a mephitic atmosphere?

Mrs. G—— and daughter (three years old), wife and child of an engineer in this town, have suffered for the last twelve months from spasmodic asthma. The yard and workshops are situated in Mill-lane, and it is necessary for Mr. G. to live on the spot. The front of his residence is exactly seventeen yards from the back of the closets of some cottages in Mill-lane. These cottages are kept in such a horrible state that the sewage occasionally covers the floor of the closets, the yard three feet wide, and even at times flows into the houses. The stench at times is insupportable. Could any of your readers inform me if such a state of things would tend to produce the disease of which I speak?

I am, Sir, your obedient servant,
Leighton Buzzard, September, 1877. WILLIAM JAMES BODGER.

*** What is the sanitary inspector about?—ED. L.

Peace.—Our correspondent would commit a great breach of taste in calling upon all the chief residents as fellow-parishioners, and a far greater one in calling upon those whom he knows to be attended by another medical man some miles off.

A Scottish Parochial Medical Officer.—We can express no opinion beyond the general notion that a direct statement of qualification is the best policy.

Mr. E. George, (Bristol.)—We can offer no opinion on the papers submitted. Our correspondent should consult a medical officer of health.

WE are requested to make the following addition to the List of Medical Teachers given in the Students' Number :—

Dr. Heinemann continues to prepare at his residence, 80, Upper Gloucester-place, Portman-square, W., for the College of Surgeons, the Apothecaries' Hall, the London University, &c.

COMMUNICATIONS not noticed in the current number shall receive attention in our issue of the ensuing week.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Farquharson, London; Professor Neumann, Vienna; Mr. Lawson Tait, Birmingham; Mr. Marsh, Tunbridge Wells; Lord Blantyre; Mr. Edlin, Norwood; Dr. Mead, London; Mr. North, Castlegate; Dr. Parkes, Birmingham; Mr. G. Brown, London; Mr. Tallack, London; Mrs. Featherston, London; Mr. Burgess, Leamington; Messrs. Lee and Nightingale, Liverpool; M. Pomian, Kingsland; Dr. Caddy, London; Mr. Ord, London; Dr. Fergus, Glasgow; Mr. Stamford, Tibshelf; Mr. Higgins, Leeds; Mr. Jay, Cheltenham; Mr. Smith, Halifax; Mr. Lewis, Calcutta; Dr. Highmore, Bradford-on-Avon; Mr. Gostling, Bombay; Mr. Sturmer, Madras; Dr. Ralton, Madras; Surgeon-Major Porter, Netley; Dr. Keay, Selkirk; Mr. Churchill, Chesham; Mr. Houghton, Dudley; Mr. Treves, Wirksworth; Dr. Thomson, Peterborough; Mr. Burdett, Greenwich; Mr. Craigmile, Liverpool; Mr. Bellamy, Sandgate; Mr. Vance, Plaistow; Dr. Newham, Winslow; Mr. Parker, Southampton; Mr. Wilkinson, Bath; Dr. Nicholls, Polperro; Mr. Owen, Poynton; Mr. Benison, London; Mr. Deakin, Allahabad; Mr. Bullen, Banstead; Mr. Pusey, Liverpool; Dr. Cameron, Dublin; Mr. Reeves, London; Mr. Teevan, London; Dr. Carver, Cambridge; Dr. Shearer, Liverpool; Dr. A. W. Smith, Glasgow; Mr. Usher, Burton-on-Trent; Messrs. Allen and Son, London; Mr. Jeffreys, Chesterfield; Mr. Capon, Dorchester; Mr. Pound, Odiham; Mr. Trend, Chorlton-on-Medlock; Mr. Prince, Worthing; Mr. Cook; Mr. Meadows, Hastings; Dr. Gibson, Edinburgh; Mr. Thorn, Poplar; Dr. Page, Newcastle-on-Tyne; Dr. Heinemann; Dr. Kerr, Edinburgh; Dr. Atkins, Cork; Mr. Allen; Dr. Lilley, Hatton; Mr. Unsworth; Mr. George, Ivy Bridge; Mr. Cooper; Mr. Turner, Keith; Mr. Lee; Mr. Hall; Mr. Worsley, Preston; Mr. Wood, Bromsgrove; Mr. Meggot; Mr. Herford; Mr. Bridgeman; Mr. T. Jones, Aberavon; Mr. Charlton; Drs. Cunningham and Lewis, Calcutta; Mr. Cullingworth, Manchester; Dr. Black, Glasgow; Mr. J. H. Steward; Dr. Harvey, Dublin; Dr. Senfleben; Dr. Thornley, Newry; Mr. Miller; Mr. Tulley, Ledbury; Dr. Farrar, Morecambe; Dr. Mackinder, Gainsborough; Mr. Nailer; Mr. Condy; Mr. Macdonald; Mr. Coventry; Mr. Knott; Mr. Evans; Dr. Foulis, Glasgow; Dr. Marshall, Lamberhurst; Dr. Peirce; Mr. Scott; Mr. Humphrey; Mr. Jackson; Dr. Conradi, Parves, N.S.W.; J. H. W.; M.R.C.S. Eng.; R. S.; A Country Club Doctor; Justice; Somebody; J. V. R. C.; Gamma; E. E. S.; Surgeon-Major; R. W.; X. L.; R. M.; Inquirens; A Constant Reader; M. D., Madras; A Wanderer; L. M.; A Stranger; S. S.; L.R.C.P.L.; R. T.; H. B. R.; J. O. P.; Vite; Zeta; A. B. C.; B. H. A.; Observer; An Unfairly Beaten Candidate; Justitia; The Registrar-General of Edinburgh; Medicus; T., Wolverhampton; Pfolliott; The Registrar-General of Births and Deaths; P. M. C.; &c.

LETTERS, *each with enclosure,* are also acknowledged from — Dr. Christie, Glasgow; Mr. Thomson, Aberdeen; Mr. Broadhead, Grimsby; Mr. Swain, Arlesey; Dr. O'Connor, Cork; Messrs. Breed and Sons, Hastings; Mr. Verling, Newmarket; Mr. Thomas, Pocklington; Colonial Kennion; Dr. Frend, Manchester; Dr. Nicholson, Dublin; Dr. Archer; Mr. Cooper; Mr. Johnson; Mr. White; Mr. Gilmour, Gloucester; Mr. Weyman; Dr. Hales; Mr. Wilson; Dr. Hulme, Wigston; Mr. Williams, Abertillery; Mr. Jones; Mr. Row; Dr. Renton, Blackhill; Mr. South; Mr. Bartie; Mr. Lawson, Berkhampstead; Mr. Berkley; Mr. Wright; Mr. Roocroft, Wigan; Dr. Thomas, Sheffield; Mr. Dunn; Dr. Jones, Llangollen; P. T.; W. F., Findon Hill; L. M., Wainfleet; Rex, Godalming; C. F., Devizes; J. A. P.; M. E. W.; A. B. C. D.; T. A., Plumstead; J. F. F., Birkenhead; Medicus, York; D. C.; T. J., Manchester; X., Brixton; Medicus, Limerick; C. A. S.; Chemist; W. A. W.; F. S.; A., Newcastle; A. M. P., Camberwell; Omicron; Beta; B. A. K.; Medicus, Rotherham; A., Manchester; Medicus, Glastonbury; A. A. F.; H. S.; Sartorius; Medicus, Westbury; Medical Officer; A. A.; C. L. D., Ramsgate; H. B.; X. Y. Z., Stourbridge; W. W. W.; Koph; Neal; M.D., Walsall; J. C.; Registrar; Surgeon; M. D. F.; Alpha, Hereford; F. H. T., Hithe; M. D.; E. W.; B. H.; Medicus, Boroughbang; A. B., Dorchester; E. H., Dartmouth; Hay, Hampstead; C. M., Bristol; M.R.C.S., Bangor; F. M. C.; Jacobus, Lambeth; G. S. L.; Alpha, Richmond; A. B.

Bath Herald, Derbyshire Courier, Sanitary Journal for Scotland, Norwich Free Press, Surrey Comet, Lincoln Gazette, Sanitary Inspector, Woman's Gazette, Animal World, Ledbury Free Press, Macclesfield Courier, Temperance Record, Hampshire Post, Lincolnshire Chronicle, Hornet, Finance Chronicle, Redditch Indicator, Colonial Standard, Dominican, Scotsman, Sussex Daily News, and *Ceylon Observer* have been received.

METEOROLOGICAL READINGS

(Taken daily at 8 A.M. by Steward's Instruments.)

THE LANCET OFFICE, SEPT. 13TH, 1877.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Wet Bulb.	Dry Bulb	Solar Radia. in Vacuo	Max. Temp. Shade	Min. Temp.	Rainfall.	Remarks at 8.30 A.M.
Sept. 7	29·84	E.	51	56	90	65	50	...	Hazy
,, 8	29·97	E.	49	58	99	63	47	...	Cloudy
,, 9	29·99	N.E.	54	63	104	67	52	...	Cloudy
,, 10	29·93	N.E.	55	57	77	61	52	0·02	Cloudy
,, 11	29·83	S.	59	63	90	70	55	...	Cloudy
,, 12	29·87	WSW	60	63	100	67	57	0·11	Fine
,, 13	30·04	S.W.	58	61	100	66	51	...	Overcast

Medical Diary for the ensuing Week.

Monday, Sept. 17.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
ST. MARK'S HOSPITAL.—Operations, 9 A.M. and 2 P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 3 P.M.

Tuesday, Sept. 18.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.

Wednesday, Sept. 19.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1½ P.M.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.
LONDON HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.

Thursday, Sept. 20.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

Friday, Sept. 21.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, Sept. 22.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

NOTICE.

In consequence of THE LANCET being frequently detained by the Post Office when posted for places abroad *more than eight days after* publication, subscribers and others are reminded that such copies can be forwarded only as book packets, and *prepaid* as such.

TERMS OF SUBSCRIPTION TO THE LANCET.

POST FREE TO ANY PART OF THE UNITED KINGDOM.

One Year ..... £1 12 6 | Six Months £0 16 3

TO THE COLONIES AND INDIA.

One Year £1 14 0

Post Office Orders in payment should be addressed to JOHN CROFT, THE LANCET Office, 423, Strand, London, and made payable to him at the Post Office, Charing-cross.

TERMS FOR ADVERTISING IN THE LANCET.

For 7 lines and under ..... £0 4 6 | For half a page £2 12 3
For every additional line ... 0 0 6 | For a page 5 0 0

The average number of words in each line is eleven.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday; those from the country must be accompanied by a remittance.

N.B.—All letters relating to Subscriptions or Advertisements should be addressed to the Publisher.

Agent for the Advertising Department in France—

MONS. DE LOMINIE, 208, Rue Grenelle St. Germain, Paris.